

**The Relationship between Organisational  
Culture and Organisational Performance –  
A study conducted within a large South African  
retail organisation.**

**BY  
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## **DECLARATION**

I, the undersigned, hereby declare that the work contained in the thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Anton F Schlechter

December 1999



## ABSTRACT

The underlying problem that prompted this study was to determine whether a relationship existed between organisational culture and organisational performance within a South African organisation. The research problem, furthermore, not only focused on establishing a relationship between aspects of organisational culture and performance, but also on whether variations in the perception of organisational culture are related to organisational performance, i.e. whether the degree to which the organisational culture is widespread or shared among members of the organisation, is related to organisational performance. To answer this question, six hypotheses were formulated with the intention of subjecting them to statistical analysis.

The *Competence Process* of Jay Hall (1996) was used to provide a theoretical framework in terms of which the relationship between the constituent dimensions of organisational culture and organisational performance may be explained. Based on the competence theory it is hypothesised that the dimensions of organisational culture or competence – *collaboration*, *commitment*, *creativity* and the supporting conditions thereof, are directly proportional to the potential for performance.

The 40-item Organisational Competence Index (OCI), which forms part of the Organisation Culture Analysis (OCA), is designed to assess the conditions for competence within an organisation. The sampling process finally produced a sample of 988 respondents that completed the organisational culture questionnaires (OCIs). The organisation was divided into 60 areas or business units that were stratified throughout the organisation. A stratified sampling technique was therefore used, and the above mentioned geographical subdivisions were used as strata.

Because of the all-pervasive nature of accounting as the language of business, financially based indicators are universally adopted to measure organisational performance. Taking the various arguments and proposed measures into consideration, it was decided to use the following three objective performance criteria: 1) financial profits; 2) stock losses; and 3) labour turnover - (indicative of the voluntary survival rate). Commercial organisations ultimately have one important "bottom line", to create wealth for all associated with the organisation and therefore to be financially successful. Thus, the indicators of organisational performance that were used are all directly relevant and based on the so-called financial "bottom line" of the organisation.

To determine the relationship between the average organisational culture scores and the performance indicators, the product moment correlation coefficients were computed between each area's average organisational culture dimension scores and the three indicators of performance.

Computing the coefficient of variation arrived at the variation in average culture dimension scores per area. To establish the relationship between the variation in average culture dimension scores and the performance indicators, the correlation coefficients were computed between the coefficient of variation and the performance measures.

All of these relationships were found to be significant, at least at the 0.05 level. The findings and conclusions arrived at, may be summarised as follows:

- The first conclusion that can be drawn is that the business units in which the members experience *collaboration* and the supporting conditions thereof to a greater degree are likely to be more profitable, to experience fewer stock losses and lower labour turnover, compared to those business units where members experience the *collaboration* dimension to a lesser degree.



- The second conclusion that can be drawn is that the business units in which the members experience *commitment* and the supporting conditions thereof to a greater degree are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *commitment* dimension to a lesser degree.
- The third conclusion that can be drawn is that the business units in which the members experience *creativity* and the supporting conditions thereof to a greater degree are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *creativity* dimension to a lesser degree.
- The fourth conclusion that can be drawn is that the business units in which the members experience the dimensions of competence and the supporting conditions thereof to a lesser degree of variance are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the culture dimensions to a greater degree of variance.

In more practical terms, it would seem that the dimensions of competence might well explain why some business units (possibly organisations) are more successful than others.

## OPSOMMING

Die onderliggende vraag wat tot hierdie studie gelei het, was om te bepaal of daar 'n verband bestaan tussen die organisatoriese kultuur en die organisasie prestasie van 'n Suid Afrikaanse maatskappy. Die navorsingsprobleem het verder nie net gefokus op die vestiging van 'n verband tussen aspekte van organisasie kultuur en prestasie nie, maar ook probeer om te bepaal of die variansie in die persepsie van organisasie kultuur ook verwant is aan prestasie. Om hierdie vrae te beantwoord is ses hipoteses geformuleer met die intensie om hulle statisties te toets.

Die Bevoegdheidsproses van Hall (1996) is gebruik as die teoretiese raamwerk wat die verband tussen die samestellende dele van organisasie kultuur en organisasie prestasie verduidelik. Hierdie teorie veronderstel dat die dimensies van organisasie bevoegdheid – samewerking, toevertrouing, kreatiwiteit en die onderskeie ondersteunende kondisies van elk, direk proporsioneel is aan die potensiaal vir prestasie.

Die 40-item Organisasie Bevoegdheidsindeks (OCI), wat deel vorm van die Organisasie Kultuur Analise (OCA), is ontwerp om die kondisies vir bevoegdheid in die organisasie te meet. Die steekproef het bestaan uit 988 respondente wat die organisasie kultuur vraelyste (OCI) voltooi het. Die organisasie is verdeel in 60 areas of besigheidseenhede wat regdeur die organisasie gestratifiseer is. 'n Gestratifiseerde steekproef trekkingstegniek is dus gebruik.

Finansiële gebaseerde indikatore word universeel gebruik om organisasie prestasie te meet. In die keuse van prestasie indikatore, is verskeie argumente en voorgestelde indikatore in ag geneem, en is daar besluit om die volgende objektiewe kriteria te gebruik: 1) finansiële winste, 2) voorraad verliese en 3) arbeidsomset. Kommersiële organisasies het uiteindelik een hoof doel, om rykdom te skep vir sy aandeelhouders en dus om finansiële suksesvol te wees.



Die indikatore van prestasie is dus so gekies dat hulle relevant is en op hierdie doelwit gebaseer is.

Om die verband te bepaal tussen die organisasie kultuur-tellings en die prestasie indikatore, is die produk moment korrelasie koëffisiënt bereken tussen die gemiddelde organisatoriese kultuur-tellings vir elke area en die area se tellings op die drie prestasie indikatore.

Die variansie in die gemiddelde kultuurmeting per area was bereken deur middel van die koëffisiënt van variansie. Die korrelasie koëffisiënt is bereken tussen hierdie meting, en die prestasie meting vir elke area.

Al hierdie verhoudings was ten minste op die 0.05 vlak betekenisvol. Die bevindinge en gevolgtrekkings van hierdie studie sluit die volgende in:

- Die eerste gevolgtrekking wat gemaak is, was dat die besigheidseenhede waar die werknemers die samewerkingsdimensie, en die ondersteunende kondisies daarvan, tot 'n groter mate ervaar het, meer wins gemaak het, laer vooraadverliese gely het en 'n laer arbeidsomset gehad het in vergelyking met die besigheidseenhede wat die samewerkingsdimensie tot 'n mindere mate ervaar het.
- Die tweede gevolgtrekking wat gemaak is, was dat die besigheidseenhede waar die werknemers toevertrouing, en die ondersteunende kondisies daarvan tot 'n groter mate ervaar het, meer wins gemaak het, laer vooraad verliese gely het en 'n laer arbeidsomset gehad het in vergelyking met die besigheidseenhede wat die toevertrouingsdimensie tot 'n mindere mate ervaar het.
- Die derde gevolgtrekking wat gemaak is, is dat die besigheidseenhede waar die werknemers die kreatiwiteitsdimensie, en die ondersteunende kondisies daarvan, tot 'n groter mate ervaar het, het meer wins gemaak, laer vooraad verliese gely en 'n laer arbeidsomset gehad in vergelyking met die

besigheidseenhede wat die kreatiwiteitsdimensie tot 'n mindere mate ervaar het.

- Die vierde gevolgtrekking wat gemaak is, was dat die besigheidseenhede waarby 'n kleiner mate van variansie in die kultuurmetings gevind is, het daardie besigheidseenhede meer profyt gemaak, laer vooraadverliese gely en 'n laer arbeidsomset gehad in vergelyking met die besigheidseenhede waar daar 'n groter mate van variansie in die kultuurmetings was.

In meer praktiese terme wil dit voorkom of die dimensies van bevoegdheid tot 'n mate kan verduidelik hoekom sekere besigheidseenhede (moontlik organisasies) meer suksesvol is as ander.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND

Going about our day to day activities, we encounter organisational cultures all the time. When they are different to our own, their most visible and unusual qualities seem striking to us, and most peculiar. When the organisational cultures are our own, they often go unnoticed - until we try to implement a new strategy or programme in our organisation that is incompatible with the central norms and values of the company (Kotter & Heskett, 1992). Then we observe the power and presence of the organisation's culture.

Attempts to conceptualise and explain organisational culture became prevalent in the 1980s and this new-found "buzz word" led to the generation of a large number of publications in the management literature of the time (Davis, 1984; Deal & Kennedy, 1982; Ouchi, 1981; Peters & Waterman, 1982). This fascination has not faded away and, even today, one cannot pick up a reputable management or organisational psychology text without finding in it at least one chapter on organisational culture.

The notion that work groups in organisations, and organisations themselves, develop their own behavioural norms was established a number of years ago. One of the first systematic attempts to understand western work organisations in these cultural terms occurred as far back as the late 1920s with the well-known Hawthorne studies at the Western Electric Company (Roethlisberger & Dickson, 1975). Specific findings from this research emphasised the importance of the culture of a work group, especially the norms regarding productivity and the attitude of workers towards management. These norms were found to have a greater impact on productivity than either technology or working conditions (Schuster, 1986). It was further shown that informal groups of workers could



exert considerable control over the behaviour, including productivity, of individual group members (Roethlisberger & Dickson, 1975). These findings led to the establishment of the *Human Relations Movement*, which is directly relevant to today's efforts to understand and manage corporate culture (Kilman, Saxton & Serpa, 1986).

The concept '*organisational culture*' has developed in such a manner that it is now viewed as an important paradigm for organisational analysis, because it provides a dynamic and interactive model of organisation within a company (Kotter & Heskett, 1992). This concept therefore provides a means to understand a number of the dynamic processes that are prevalent in the organisation. For this reason, the concept has become important for theorists and practitioners alike, in that it provides another way of understanding and describing organisations. The value of studying organisational culture lies in the fact that the better we understand organisations, the better we can manipulate them, control them and predict the outcomes of the dynamic processes that prevail within them (Kotter & Heskett, 1992).

Management practitioners had a gut feeling that this culture, which they believed to exist in their organisations, had an effect on how successful they were (Hofstede, 1994). This, to a large extent, led to the interest in the study of organisational culture. Although these studies generated a flood of publications, not many empirical studies attempted to assess the impact of organisational culture on corporate performance to so verify this gut feeling (Petty, Beadles, Lowery, Chapman & Connell, 1995). The relationship between organisational culture and organisational performance postulated by organisational analysts makes organisational culture a significant consideration for practitioners, and one that cannot be ignored.

However, among researchers there is some disagreement as to whether corporate culture actually has any effect upon organisational performance (Van der Post, 1997). While some have argued that it exerts a powerful effect upon the firm's performance (Barney, 1986; Deal & Kennedy, 1982; Denison, 1990; Peters & Waterman, 1982) others argue that there is no such link, or that the relationship

has no measurable effect (Arogyaswamy & Byles, 1987; Saffold, 1988). For the most part, however, the arguments in favour of such a relationship have been based on case studies without formal measurement of either organisational culture or organisational performance (Langan-Fox & Tan, 1997). Notwithstanding the fact that statistical evidence seems to be lacking, it is currently acknowledged that corporate culture has the potential of having a significant effect on organisational performance (Petty, Beadles, Lowery, Chapman & Connell, 1995).

One example of this relationship is the superior financial performance of certain American organisations that have been attributed to the culture that each of them developed (Peters & Waterman, 1982). After closer examination, it was found that these successful companies were mostly characterised by a strong set of core managerial values that define the ways in which they conduct business, how they treat employees, customers, suppliers and others (Barney, 1986).

Recent studies have indicated that, over and above the fact that corporate culture may have an impact on a firm's long-term financial performance, corporate culture will probably be an even more important factor in determining the success or failure of firms in the next decade (Langan-Fox & Tan, 1997). This is illustrative of the power and influence that is attributed to the organisational culture by practitioners and authors alike.

However, the existence of a positive link between organisational culture and performance has not gained unanimous acceptance (Petty *et al.*, 1995). Greenburg and Baron (1997, p. 480) summarise the search for such a relationship thus far as follows, "...the idea that some cultures are more strongly associated with successful organisational performance than others must be considered questionable at this time."



## **1.2 RELEVANCE OF THIS STUDY**

In today's business environment the organisation is confronted with many challenges, the broadest and most important being the ability to survive in an extremely competitive economic environment (Dubrin & Ireland, 1993). More specific challenges include competing effectively in a global market place and achieving high productivity and quality with fewer employees.

To achieve these goals requires the optimal application and effective management of the human resources within the organisation and every possible route needs to be followed for finding ways in which to better cope with these challenges (Dubrin & Ireland, 1993). For practitioners of management, the postulated relationship between organisational culture and organisational outcomes (performance) proposed by organisational analysts, makes organisational culture a significant consideration in that it provides one such route (Petty, Beadles, Lowery, Chapman & Connell, 1995).

Due to a number of reasons, managers, on the whole, have been reluctant to busy themselves with their organisation's culture (Kotter & Heskett, 1992). Given the South African situation, confirming that a significant relationship exists between organisational culture and performance will also hopefully encourage managers to begin to pay serious attention to this dimension of the organisation.

## **1.3 THE SOUTH AFRICAN CONTEXT**

On 27 April 1994, an era of international isolation and the enforced fragmentation of South African society came to an end. The day brought with it the hopes for a prosperous and united country in which all people would share the benefits of the new dispensation. Unfortunately, as the result of many factors, South Africa has a society and economy that is internally focused and is in dire straits (Shaw, 1997).

While there are many problems that South Africans must face as a nation, the present situation presents numerous opportunities. But it must be acknowledged that the quality of life of a nation is premised on the ability of that nation to generate wealth (Shaw, 1997).

Organisations, in their various forms, provide this source of wealth (Shaw, 1997). The optimisation of human resources utilisation must therefore rank as a key managerial concern in any organisation, particularly in a country like South Africa where productivity has never been rated highly (Van der Post, 1997). In a post-apartheid era in which economic growth is of utmost importance to provide economic, political and social stability for all South Africans, any attempt to achieve this goal must receive serious consideration. One such an attempt is the investigation into the relationship between organisational culture and organisational performance.

#### **1.4 PURPOSE OF THE STUDY**

The purpose of the study is to examine the relationship between organisational culture and organisational performance in a South African retail chain. The objective statement is therefore:

**“To design and conduct a scientific investigation in a South African organisation, in order to determine whether a relationship exists between organisational culture and organisational performance.”**

The research design to achieve this objective is schematically illustrated in Figure 1.1.





**FIGURE 1.1: Schema of Research**

## **1.5 ASSUMPTIONS**

This study was based on a number of assumptions that need to be mentioned and clarified.

Stating the obvious, it was firstly assumed that there exists a need in the field of Organisational Psychology and Human Resources Management to manage and apply the human resources in every organisation in the most optimal and efficient manner possible.

It is secondly assumed that organisational culture, and the active and deliberate management thereof, will become more and more important in the creation of a climate in which employees will be encouraged to willingly contribute to their full potential, so that the organisation may prosper and be successful. Implicit in this assumption is the belief that an organisational culture that liberates latent human potential will contribute to the organisation's performance.

Thirdly, it was assumed that corporate cultures that inhibit long-term financial performance are not rare and that they develop easily, even in firms that are staffed by reasonable and intelligent people; and that corporate cultures, although difficult to change, can be manipulated to suit one's requirements.

The Competence Process is further based on a number of assumptions that will be discussed elsewhere under the relevant heading.

## **1.6 DELIMITATIONS**

The focus of this study was on the organisational culture and the link thereof with the organisation's performance, notwithstanding the fact that it must be acknowledged that there are many other significant contributors to performance (e.g., the economy, governmental regulation, the existence of competitors, etc.). The identification and measurement of all these other factors contributing to financial performance are beyond the scope of this study.



The difficulties of establishing the evidence of causality between organisational culture and organisational performance are well known and acknowledged (Petty *et al.*, 1995).

The research methodology followed by this study was not designed to prove causality between the variables. This is true of virtually all research in management, where the type of controlled experiments that would prove causality are impossible (Rollins & Roberts, 1998). It merely describes the dimensions of organisational culture and associates them with those of organisational performance. It is unsure whether organisational culture causes organisational performance or *vice versa*. The causality between these variables is likened to the proverbial chicken and egg problem. Which came first? The chicken or the egg? The belief is that these variables are in fact cyclic (Hampden-Turner, 1990).

In this study there is a variable that needs to be explained or predicted (organisational performance) and a variable that will offer the explanation or prediction that is desired (organisational culture). The former is known as an *endogenous* variable, whereas the latter is known as a *exogenous* variable (Kelloway, 1998).

Exogenous variables are considered to be the starting point of a model and there is no concern as to how these exogenous variables come about. Endogenous variables may serve as both predictors and criteria, being predicted by exogenous variables and predicting other endogenous variables (Kelloway, 1998). A model, then, is a set of theoretical propositions that links the exogenous variable to the endogenous variables and the endogenous variables to one another (Kelloway, 1998). Taken as a whole, the model explains both what relationships are expected to be found in the data and what relationships are not expected to emerge.

Although the hypotheses underlying model development may be causal in nature, assessing the fit of a model does not provide a basis for a causal inference (Kelloway, 1998). Meeting the conditions for causal inference is more

of study design than of statistical technique (Kelloway, 1998). Therefore, even if a statistical relationship were to be found by this study, it would not prove causality.

A further delimitation of this study is that it was conducted in only one organisation, a South African retail chain, namely PEP Stores Ltd. The conclusions that are drawn from the data are therefore only relevant to this organisation. A large sample that consisted of 988 employees, out of a described population of 1280, was obtained from the organisation.

The fact that the study was limited to the PEP Stores organisation only, will always remain a serious limitation of this study in any attempt to generalise the results and conclusions with regard to other organisations.

## **1.7 THE ORGANISATION**

PEP Stores Ltd was the subject of this research project and a brief introduction to this company follows.

The Pepkor group has its origins in the discount clothing retail chain Pep Stores that was started in Upington in the Northern Cape region of South Africa in 1965. Pepkor, which targeted the lower end of the consumer market from the outset, is the largest retail group in Africa today. It consists of seven major subsidiaries of which three are quoted on the Johannesburg Stock Exchange and one on the London Stock Exchange. These businesses together operate some 2 600 retail outlets and employ about 63 000 people in Africa, the United Kingdom and Australia.

Pep Stores was listed on the Johannesburg Stock Exchange in 1972. Its philosophy of partnership with the communities in which it operates, in time led to the creation of Pep Peninsula Holdings and Pep Reef, in which members of disadvantaged communities hold the majority share. The partnership concept



was developed further in the early nineties with the listing of Pep Botswana and Pep Namibia on the stock exchanges of these countries, thereby enabling small investors in these communities to share in the wealth that was being created.

Pep Limited, the core clothing business of the group, operates 941 Pep Stores outlets throughout South Africa, and a further 300 branches elsewhere in Africa. Its manufacturing operations have been significantly downscaled, supplying 11% of the chain's stock during the year under review. This translates into nine factories producing clothing and textiles largely for sale in its various outlets.

The company entered food retailing in early 1979 with the take-over of Shoprite which, in turn, acquired Grand Bazaars. After the acquisition of the discount clothing chain Ackermans, in 1986, the group listed its clothing interests on the Johannesburg Stock Exchange as Pep Limited and its food interests as Shoprite Holdings Limited. In 1991 Pepkor acquired control of the retail chains Smart Group Holdings, Cashbuild, Checkers and Stuttafords, thereby virtually doubling the size of the group overnight. In the large-scale rationalisation that followed, Checkers became part of the group's food interests under the Shoprite banner.

Also in 1991, the group extended its interests to the United Kingdom with the opening of the first branch of Your More Store in Scotland, which today operates about 150 outlets. Three years later, in 1994, it gained management control (and the next year effective control) of the then loss-making listed British company Brown & Jackson with its wholly-owned retail chain Poundstretcher. In the latter half of 1997 Pepkor consolidated its UK retail interests in Brown & Jackson with the latter, at the same time acquiring a third chain, What Everyone Wants.

On 1 November 1997 Shoprite Holdings acquired the struggling OK Bazaars with its chains of supermarkets, furniture stores and Hyperamas' from South African Breweries. Through this acquisition the group has become the dominant food retailing business in South Africa. On 1 April 1998 Pepkor extended its interests to Australia by acquiring the clothing chain Best & Less, with more

than 80 stores. Expanding its interests into Africa is an ongoing process, and the group today trades in 11 African countries to as far north as Ghana.

## 1.8 OUTLINE OF THE RESEARCH REPORT BY CHAPTER

Based on the schema for the research reflected in Figure 1.1, the following sequence of chapters was derived.

**Chapter one** comprises an introduction; a general overview providing the background for the study; notes on the relevance and purpose of the study; the assumptions and delimitations; an outline for the research project; and an overview of the organisation that is the subject of this study.

**Chapter two** consists of a literature review of organisational culture and provides a theoretical perspective of the concept. The chapter begins with an overview of the history and development of the concept as a research topic, which is followed by various conceptualisations of the concept. The formation, transmission, maintenance and its role in the organisation is further discussed. The chapter concludes with a brief description of a model for organisational culture change and the measurement thereof.

**Chapter three** provides a theoretical perspective on organisational performance, and briefly describes the *competence process* that provides a theoretical relationship between organisational culture and organisational performance.

**Chapter four** comprises the problem formulation, the objectives of the study, and stipulates the hypotheses that are to be examined. The chapter also describes the research design and method of data collection used.

**Chapter five** constitutes the presentation of the results. The data is reported and presented in meaningful tables and the hypotheses are also tested.



**Chapter six** deals with the discussion of the findings, and the results that were obtained and the conclusions that were reached from the study.

**Chapter seven** is the final chapter and begins with a summary of the study. This is followed by a brief review of the shortcomings of the study, followed by recommendations, and ends with a few concluding remarks.

## **1.9 SUMMARY**

The purpose of this study was to establish whether a statistical relationship between organisational culture and a number of indicators of organisational performance exists.

The aim of this chapter was to establish the background for this study and outline the research problem making, with mention of the South African context. The purpose and relevance of the study were further discussed. The chapter concludes with a review of the assumptions on which this study is based and the limitations of this project. An outline of the chapters to follow is also provided.



## **CHAPTER 2**

### **THEORETICAL PERSPECTIVES ON ORGANISATIONAL CULTURE**

#### **2.1 INTRODUCTION**

Success in business is not determined by the skills of the executives alone, nor by the visible features of the organisation, i.e. the strategies, structures or reward systems (Kilmann, 1985). Rather, the organisation has an invisible quality, a certain style, character or way of doing things, that may be more powerful than the leadership of any one-person or organisational system. To understand the soul of the organisation requires travelling below the charts, rulebooks, machines and buildings into the underground world of corporate cultures (Kilmann, 1985).

The first systematic attempt to understand western work organisations in cultural terms occurred in the late 1920s with the well-known Hawthorne studies at the Western Electric Company (Roethlisberger & Dickson, 1975). Specific findings from this research emphasised the importance of the culture of a work group and the role that these cultural norms played in productivity and the attitude of workers towards management (Schuster, 1986).

These norms were found to have a greater impact on productivity than either technology or working conditions (Schuster, 1986) and informal groups of workers were found to exert considerable control over the behaviour of individual group members by way of these norms (Roethlisberger & Dickson, 1975). These findings sparked an interest in this concept and planted the seed for a tree that blossomed 60 years later, in the 1980s.

It is important to gain an understanding of previous research on organisational culture before an attempt is made to determine the relationship between this concept and organisational performance. Therefore, a discussion concerning a number of important issues concerning the concept was deemed necessary.

The chapter begins with an overview of the history and development of organisational culture as concept and research topic, and is followed by a discussion of the difference between organisational culture and organisational climate. To understand organisational culture more fully, the concept is further defined; outlined with the help of a number of models; and its role in the organisation is clarified. The formation, transmission and maintenance of organisational culture are also discussed. The chapter concludes with a brief discussion of a five-point intervention point plan to pro-actively change the organisational culture and the measurement of organisational culture.

## **2.2 ORGANISATIONAL CULTURE AND OTHER TYPES OF CULTURE**

Organisational culture is not the same thing as national culture, regional culture, ethnic culture, or any other type of culture. *Organisational culture* specifically refers to the values and behaviours of employees in organisations, such as corporations, companies and not-for-profit organisations (Rollins & Roberts, 1998). Organisational culture is certainly influenced by these other types of cultures, but different organisations still have distinctive organisational culture that are strongly influenced by the organisation's specific history and attributes.

## **2.3 AN INTRODUCTION TO THE DEVELOPMENT OF ORGANISATIONAL CULTURE AS RESEARCH FOCUS IN MODERN DAY MANAGEMENT LITERATURE**

The 1980s witnessed an unprecedented surge in the field of organisational psychology and management, which included a particular interest in corporate



culture (Frost, Moore, Louis, Lundberg & Martin, 1985). Summary texts of this field of study have become best sellers and have made a significant mark on management practices and on the general public.

The trend began to gain popularity with two books that examined the challenges that Japan posed for the American industry. They were *Theory Z* (Ouchi, 1981) and *The Art of Japanese Management* (Pascale & Athos 1981). The trend continued with a further two books that focused more closely on the American industry itself, *Corporate Cultures* (Deal & Kennedy 1982) and *The Change Masters* (Kanter 1983), and reached an early peak with the book that perhaps best exemplified the trend, *In Search of Excellence* (Peters & Waterman 1982). This led to the situation where, even today, both popular and academic authors have continued to produce a string of books with a focus on management that has captured the attention of managers throughout the decade. These early writers on organisational behaviour influenced many of the predominant ideas in current organisational culture literature (McIntyre-Ray, 1989, cited in Van der Post, 1997).

These texts that shifted the focus of the organisation to the organisational culture, were not the first that appeared in management literature with such an orientation. McGregor (1960), in *The Human Side of Enterprise*, stated, as far back as 1960, that most managers make incorrect assumptions about those who work for them, which then leads to the development of a particular organisational culture. McGregor (1960) was among the first authors to suggest practical applications derived from findings concerning corporate culture that came from the Hawthorne studies.

Argyris (1964), like McGregor, also presented a strong case for reducing the amount of organisational control by management. Argyris (1964) believed that the many constraints placed on human beings by organisations are self-defeating with regard to the organisational goals of effectiveness and efficiency. He further recommended that management develop a climate in which problems could be expressed openly and in which employee hostility could be understood and accepted.



Likert (1961), in *New Patterns of Management*, concluded that a genuine interest in, and an unselfish concern for, the success and wellbeing of subordinates on the part of the superior has a marked effect on performance. He emphasised the need for a corporate culture of co-operation and demonstrated that there was a significant correlation between employee attitudes and performance (Likert, 1961).

Drucker (1973), in *Management*, observed the reciprocal nature of the relationship between management and culture. He contended that management is, and should be, culturally conditioned and that management and managers, in turn, should shape the organisational culture of the organisation.

Porter, Lawler and Hackman (1975) stressed that change and development activities in organisations do not take place in a vacuum. They are always embedded in an existing organisational climate or culture, and this culture will have a vital impact on the degree of success of any efforts to alter or improve the organisation.

The search for new ways to economic success then began to focus on the Japanese way of management. Ouchi (1981), in the already mentioned *Theory Z*, suggested that an organisational culture that promoted involvement was desirable, because involved workers, according to him, were the key to increased productivity.

Pascale and Athos (1981) asserted that the prime determinant of the success of an organisation lies in its management. They called for greater management sophistication in respect of "man-in-organisations" but also acknowledged that the effort to alter the managerial subculture would take a long time and prove to be very difficult.

Peters and Waterman (1982) asserted that the key to productivity lies in the "systems" within which employees work. The productivity-through-people concept was supported in a research study of 1300 major United States organisations. The conclusion of this report was that the dominant theme of

American management practices would be the transformation of organisational cultures towards a more participative organisation that emphasised attentiveness to employee needs as a major corporate strategy (Schuster, 1986).

The latter three texts presented a different picture of management from that usually offered by the strategists, financiers, and marketers who had traditionally run American corporations (Petty *et al.*, 1995). Rather than assume, as many have, that large corporations are simply "black boxes" that respond to external markets and regulatory forces and can be run solely on financial criteria, these authors concentrated on what might be called the "behavioural side" of management and of the organisation. They argued that the difference between successful and not-so-successful organisations rests with the values and principles that underlie their internal organisation. This group of authors emphasised a set of elusive, "soft" variables that are usually regarded as important, but are often seen as having little direct and predictable impact on the fate of an organisation. This belief is being challenged and it is now becoming a reality that these "soft" variables may, after all, actually have an impact on the fate of the organisation (Petty *et al.*, 1995).

## **2.4 THE DEBATE: ORGANISATIONAL CULTURE AND ORGANISATIONAL CLIMATE**

Questionnaire approaches to the study of organisational culture are often indistinguishable from studies of organisational climate (Hofstede, 1998). Historically, the concept of climate preceded that of culture, with important publications on climate dating from the 1960s and 1970s. Litwin and Stringer (1968, p. 1, quoted in Hofstede, 1998) defined organisational climate as follows:

“ ...the term organisational climate refers to a set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and are assumed to influence their motivation and behaviour.”



They further stated that:

“The concept ‘*climate*’ provides a useful bridge between theories of individual motivation and behaviour, on one hand, and organisational theories, on the other.”

Organisational climate was defined by Tagiuri and Litwin (1968, p. 27) as a:

“...relatively enduring quality of the internal environment of an organisation that is experienced by its members, influences their behaviour and can be described in terms of the values of a particular set of characteristics or attributes of the organisation.”

McGregor (1960) developed the notion of managerial climate, which he defined in terms of manifestations of the assumptions of management. He asserted that the day-to-day behaviour of the immediate supervisor and other significant people in the managerial organisation communicate something about their assumptions concerning management, which is of fundamental significance. Many behavioural manifestations of managerial attitude create what is often referred to as the psychological climate of the relationship (Hofstede, 1998). This psychological experience was referred to as organisational climate. The concept ‘*organisational climate*’ in this way links the individual and the organisational level (Hofstede, 1998).

Organisational climate studies, like organisational culture studies, have been criticised for being nothing less than studies of job satisfaction. In this regard Schneider and Snyder (1975) showed empirically that climate measures that are designed to reflect organisational/descriptive differences rather than individual/evaluative differences, differ significantly from satisfaction measures. Nevertheless, the term climate does not have an evaluative connotation. Climates are better or worse, wholesome and insalubrious, but never a quantity. Therefore, it should come as no surprise that climate measures overlap with satisfaction measures as they are so closely related to one another (Schneider & Snyder, 1975).



Schneider (1975), in a review essay, argues that organisational climate is too general a research area and that any number of kinds of climates may be identified, depending upon the criterion of interest. Therefore he, using one example, could describe a communication climate. This is referred to as consistently isolated independent dimensions directly related to communication processes.

The question that remains is what, exactly, is the difference between the concept of organisational climate and the later concept of organisational culture. In some studies no difference was identified. Gordon and DiTomaso (1992), for example, related organisational culture to corporate performance and measured the former with a *Survey of Management Climate*, which was designed before the term '*organisational culture*' became fashionable.

Buono and Bowditch (1989), on the other hand, argued that although the concepts '*organisational culture*' and '*organisational climate*' are often used interchangeably, there are basic differences between the two concepts. Organisational climate was defined by them as a measure of whether employee's expectations about what it should be like to work in an organisation are being met. They stated that organisational culture, by contrast, is concerned with the nature of beliefs and expectations about organisational life. Climate is therefore measured by organisational surveys as an indicator of the extent to which these employees' beliefs and expectations are being fulfilled. Organisational culture, characterised by values and expectations, is seen as being more deep-rooted and having a long-term perspective (Buono & Bowditch, 1989).

To summarise, the literature reveals a number of substantial differences between these concepts (Poole 1985):

- Climate derives from sociology and culture from anthropology. This affects the methods by which they are studied.
- Climate is more closely linked with individual motivation and behaviour than culture, which resides entirely at the organisational level.

- Climate has an evaluative connotation and partly overlaps with satisfaction, therefore cultures can be different without one being objectively better than the other. Peters and Waterman's (1982) claim, that strong cultures are better than others, has been sufficiently refuted (e.g. Soeters, 1986). Strong cultures, in the sense of cohesive cultures, which impose extensive and immutable mental programming, are for that same reason difficult to change and are likely to adapt less well to changing circumstances than weaker ones.
- Climate can fruitfully be seen as a sub-set of culture.

Due to the differences that exist between organisational culture and organisational climate, the discussion must move forward to establish what exactly organisational culture is.

## **2.5 ORGANISATIONAL CULTURE: THE CONCEPT**

Anyone who has worked in several different organisations knows that each is unique. Even organisations concerned with the same activities or which provide similar products or services can be very different places in which to work. The question that arises concerns how such similar businesses can be so different.

It would be tempting to speculate that, because employees have different personalities, the organisations in which they work are likely to be different from each other as well. However, when one considers that entire organisations are often so consistently different from each other, it is apparent that more is involved than simple differences in the personalities of the employees (Frost *et al.*, 1985). In fact, employees are a consistently changing set of characters due to labour turnover in many organisations.

Despite these shifts, however, the organisations themselves alter slowly, if at all. In fact, it is often the new employees who themselves change, rather than the organisation (Greenburg & Baron, 1997). Therefore organisations, in a sense,



have a stable existence of their own, quite apart from the unique combination of people of which they are composed at any given time (Kilmann, 1985).

What accounts for such stability? To a great extent, the answer involves the impact of organisational culture. *Organisational culture* is a term that has come to comprise a set of behavioural variables that have drawn a lot of attention in organisational literature. This concept refers to the underlying values, beliefs, and principles that provide meaning and direction to a company (Kilmann, 1985).

It further serves as a foundation for an organisation's management system, as well as the set of management practices and behaviours that both exemplify and reinforce these basic principles (Gibson, Ivancevich & Donnelly, 1997). These principles and practices endure because they have meaning for the members of an organisation. They represent strategies for survival that have worked well in the past and that the members believe will work again in the future (Gibson, Ivancevich & Donnelly, 1997).

Thus, a cultural theory of organisational effectiveness must take, as its starting point, the observation that the values, beliefs, and meanings that underlie a social system are the primary source of motivated and co-ordinated activity (Dennison, 1990).

### **2.5.1 DEFINING ORGANISATIONAL CULTURE**

It is not surprising that the study of organisational culture should propose numerous definitions of culture, considering its roots in anthropology where Kroeber and Kluckhohn (1963) identified no less than 164 meanings of the word. The definitions of this concept can basically be categorised as those that see culture as: shared meanings (Louis, 1985); central values (Barney, 1986); assumptions (Schein, 1985); and beliefs (Davis, 1984).



Due to its nature, organisational culture is not a particularly easy concept to address (Petty, Beadles, Lowery, Chapman & Connell, 1995). The researchers who have applied this concept to organisations and used it in a business context have defined organisational culture differently and disagree somewhat as to the precise nature of the construct. In their introduction to the Administrative Science Quarterly special issue on organisational culture, Jelinek, Smircich and Hirsch (1983) observed that the concept of organisational culture is not well developed and that it may be desirable to have a range of approaches, rather than one fixed definition thereof.

The construct has since undergone much development, but this vagueness and sense of confusion between different authors unfortunately still exists (Jelinek *et al.*, 1983). This uncertainty can be observed in the myriad of definitions and conceptualisations of the construct that prevails in the current literature, some of which will be discussed.

The above arguments may paint a bleak picture, leaving one with the impression that the search for the meaning of '*organisational culture*' is futile and should have been abandoned, but this has not been the case, for a number of reasons. This raises the question as to why the construct, with all its difficulties, survived so long. A number of answers for this question can be found and the most prominent ones are (Jelinek, Smircich & Hirsch, 1983):

- The answer to this question can be found partly in the fact that organisational psychology research has progressed considerably and certain obstacles have been overcome. The larger community of theorists have accepted certain aspects of the conceptualisations and definitions proposed for the construct.
- A further reason is that there is enough evidence of organisational culture for employees to know that it does exist and this has assured the interest of researchers.

- Enough “informal” evidence of positive or desirable outcomes resulting from a particular culture dimension has been observed to warrant the interest.

Due to the above-mentioned facts there is no shortage of definitions of organisational culture and a few of them follow.

Organisational culture can be conceptualised as being to the organisation what personality is to the individual (Green, 1989). It can be seen as a hidden but unifying force that provides meaning and direction to the organisation. This organisational personality that is referred to as organisational culture represents, amongst other things: a system of shared meaning; the prevailing background fabric of prescriptions and proscriptions for behaviour; the system of beliefs and values that ultimately shape employee behaviour (Green, 1989).

Deal and Kennedy (1982) described corporate culture as the dominant values espoused by an organisation, and, according to Pascale and Athos (1981), it dictates the philosophy that guides an organisation's policy towards employees and customers.

Bower (1966) simply stated that it is the way things are done in an organisation, a sentiment shared by Quinn (1988), who defined organisational culture as the set of values and assumptions that further underlie the above statement.

Schein (1990) believes that it represents the basic assumptions and beliefs that are shared by members of an organisation. Related to this perspective, French and Bell (1984) stated that it represents the prevailing patterns of values, attitudes, beliefs, assumptions, expectations, activities, interactions, norms, and sentiments in an organisation.

White (1991) maintained that it represents the sum of behaviour patterns in the organisation that have been built up over many years. Smircich (1983), like White, defined corporate culture as the patterns of beliefs, symbols, rituals, myths and practices that have evolved over time in every organisation.



Kotter and Heskett (1992) viewed organisational culture as that which provides the behaviour patterns or styles that new employees are automatically encouraged to follow. In a similar way, Ott (1989) defined corporate culture as the social force that controls the patterns of organisational behaviour by shaping members cognition's and perceptions of meanings and realities, providing effective energy for mobilisation and identifying who belongs and who does not. Denison (1990) stated that organisational culture provides the underlying values, beliefs and principles that serve as a foundation for an organisation's management system, as well as the set of management practices and behaviours.

Schein (1990, p. 109) defined organisational culture as:

" ...a pattern of basic assumptions invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid and therefore is to be taught to new members as the correct way to think and feel in relation to those problems."

After conducting a survey of the literature and studying the various definitions of organisational culture it was found that they represent two broad categories, those which describe culture in an overt fashion and those which treat it as an underlying force (Petty *et al.*, 1995). Although these appear to be the two primary approaches, some researchers have come up with definitions by combining these two views.

The first group views culture as how an organisation sets its strategy, develops goals, measures progress and defines products and markets. Culture is considered as a mechanism for governing rational behaviour, a system of broad rules for appropriate action under specific contingencies (Petty *et al.*, 1995). Those who hold this view tend to write for and from a practitioner's perspective and consequently often seem to regard culture at least partially malleable and thus amenable to managerial intervention (Petty *et al.*, 1995).



The second group focuses on underlying systems of unconscious assumptions and beliefs that are shared by members of an organisation (Schein, 1989) and expressed symbols, ceremonies and myths (Ouchi, 1981). The researchers that have this perspective agree that an organisation's value system is a key element to the definition of culture (Deal & Kennedy, 1982; Peters and Waterman, 1982). Adherents often also view culture as static and resistant to change. Though, even here, authors are to be found who write for practising managers that appear to view culture as more dynamic than their anthropological and clinical colleagues.

The two views that are proposed should not be seen as being in conflict with one another, but rather as that they are complementary (Petty *et al.*, 1995). The first approach is more dynamic and has a longer-term view of corporate culture, while the second is found to be more static and to have a shorter-term view of corporate culture. Most theorists agree that organisational culture should essentially be viewed as a long-term phenomenon (the second perspective) and that this view is more useful from an organisational development perspective (Green, 1989).

All these definitions, however, have a number of central themes, namely that organisational culture refers to a system of shared meaning, the prevailing background fabric of prescriptions and proscriptions for behaviour, the system of beliefs and values and the technology and task of the organisation, together with the accepted approaches to these.

In the light of the above definitions, organisational culture is defined, for the purposes of this study, in the following manner:

*The underlying values, beliefs and principles that serve as the foundation of an organisation's system of management and the practices and policies of management used by managers or leaders, that ultimately shape employee behaviour and lead to the release of employee potential.*

## 2.6 CHARACTERISTICS OF ORGANISATIONAL CULTURE

At the root of any organisation's culture is a set of core characteristics that are collectively valued by members of an organisation. Research by Chatman and Jehn (1994) has shown that several elements of organisational culture may be used to describe organisations. They are as follows:

- *Innovation*: the extent to which employees are expected to be creative and generate new ideas.
- *Stability*: valuing a stable, predictable, rule-orientated environment.
- *Orientation towards people*: being fair, supportive and showing respect for individual rights.
- *Results-orientation*: the strength of its concern for achieving desired results.
- *Easy-goingness*: the extent to which the work atmosphere is relaxed and laid back.
- *Attention to detail*: concern for being analytical and precise.

Luthans (1992) also described six important characteristics of organisational culture. They are:

- i) *Observed behavioural regularities*. Organisational members, in their interaction with one another, use common language, terminology and rituals related to deference and demeanour.
- ii) *Norms*. Organisational members adhere to standards of behaviour which include the guidelines on how much work they need to produce.



- iii) *Dominant values.* These are important values that the organisation advocates and expects members to share, e.g. high efficiency, low absenteeism and high product quality.
- iv) *Philosophy.* There are policies setting out the organisation's beliefs about how employees / customers are to be treated.
- v) *Rules.* There are strict guidelines related to getting along in the organisation. Newcomers must learn these in order to be accepted as fully-fledged members of the group.
- vi) *Organisational climate.* This is the overall "feeling" that is conveyed by the physical layout, the way in which organisational members interact and the way in which members of the organisation conduct themselves with customers or other outsiders.

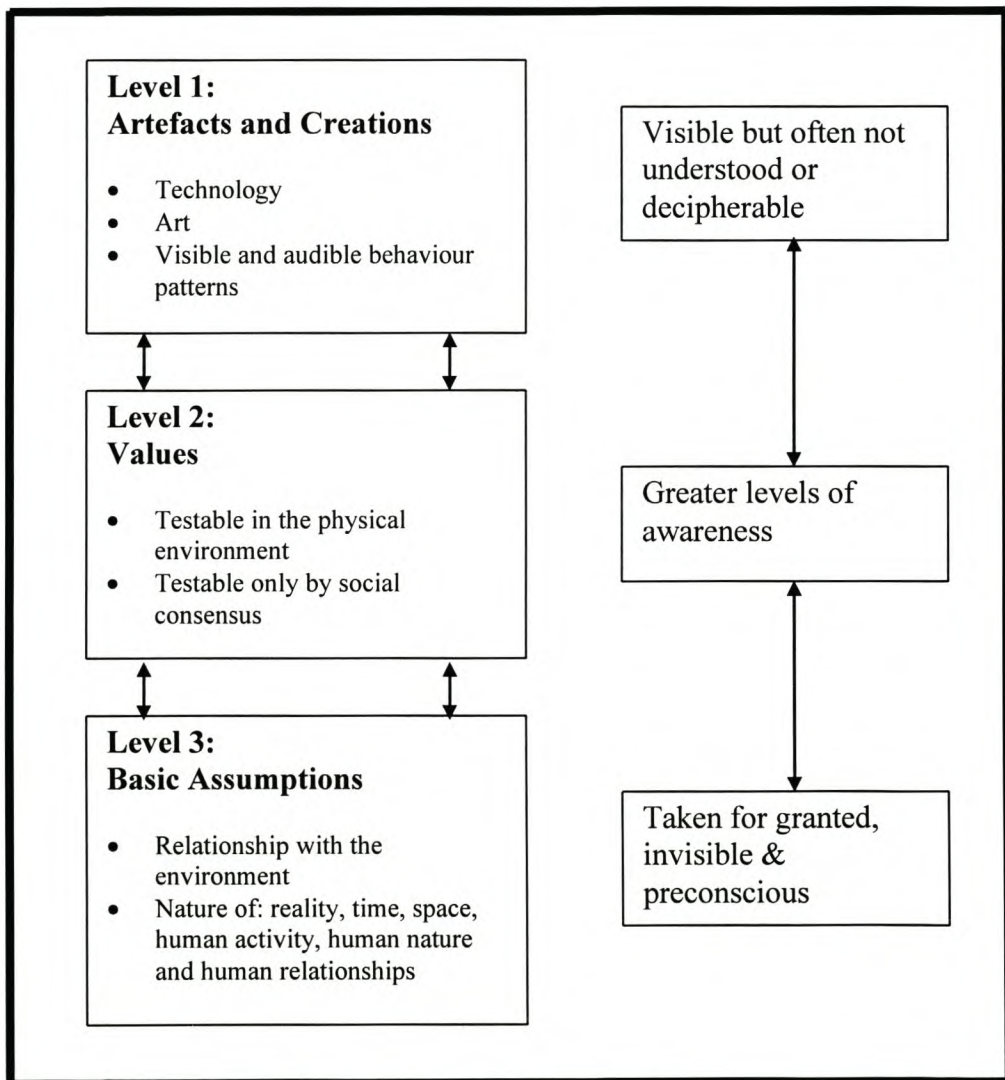
## 2.7 MODELS OF ORGANISATIONAL CULTURE

Closely linked to the definitions of corporate culture, are the models or typologies of the concept. Schein's (1985) definition of organisational culture, as stated above, points out that culture involves certain assumptions, adaptations, perceptions and learning. On this definition, he based what has become one of the best and most used descriptions or models of organisational culture, the *three-level model* of organisational culture (Ott, 1989). Schein's three-level model is described as being the most useful typology proposed to date for classifying elements of organisational culture into usable groupings (Ott, 1989).

The first level, and most clearly visible one, of culture is composed by artefacts, technology, art, audible and overt organisational behaviour patterns and other aspects of organisational culture that are easy to see but hard to interpret without an understanding of the other levels (Ott, 1989). This level also includes such things as the written and spoken language, annual reports, furnishings, etc.

The second and deeper level of organisational culture reveals how people communicate, explain, rationalise and justify what they say and do. At this level Schein (1985) identifies values or a sense of what ought to be and what is considered important to employees.

The third level goes the deepest and consists of people's ideas and assumptions that govern and guide their communications, justifications and behaviour. Here, the espoused values and the articulation of these values into a philosophy of operating is found (Schein, 1985). Figure 2.1 presents Schein's three-layer model of organisational culture.



**FIGURE 2.1 Schein's Three-Layer Model of Organisational Culture**

Source: Schein (1985)



A second model is the one proposed by Kotter and Heskett (1992) who view organisational culture as having two levels that differ in terms of, 1) their visibility and, 2) their resistance to change. At the deeper level, culture refers to values that are shared by people in a group and that tend to persist over time, even when group membership changes. These notions about what is important in life can vary greatly in different companies. In some settings employees care deeply about money, in others about technological innovation or employee wellbeing. At this level, organisational culture can be extremely difficult to change, in part because group members are often unaware of many of the values that bind them together.

At the more visible level, culture represents the behaviour patterns or style of an organisation that new employees are automatically encouraged to follow by their fellow employees. Examples are, for instance, a group of employees that have been known to be “hard workers”, or those that wear conservative clothes, etc. Organisational culture, in this sense, is still difficult to change, but not nearly as difficult as at the level of basic values (Kotter & Heskett, 1992).

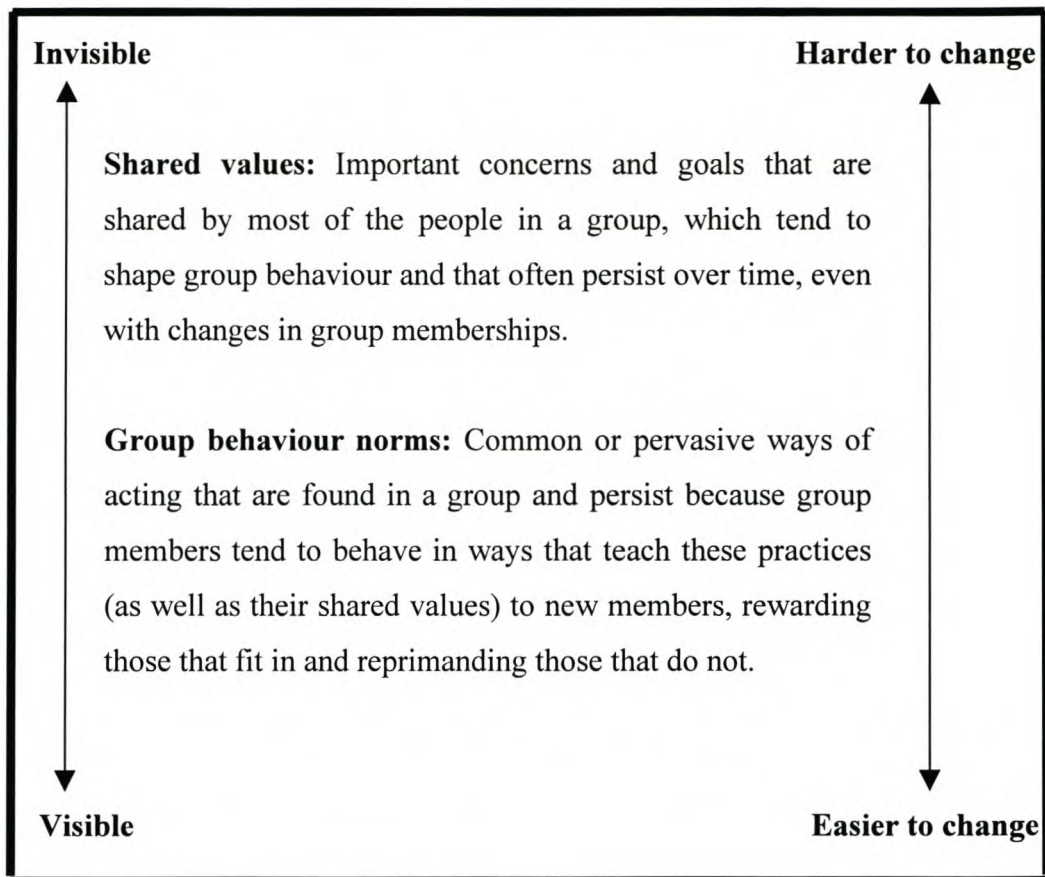
Each level of culture has a natural tendency to influence the other. This is, perhaps, the most obvious in terms of shared values influencing a group's behaviour, but causality can flow in the other direction too; behaviour and practices can influence values (See Figure 2.2).

## **2.8 ORGANISATIONAL CULTURE'S ROLE IN THE ORGANISATION**

Considering the definitions of organisational culture, it is striking to realise that organisational culture is an intangible force, but one with far-reaching consequences (Greenburg & Baron, 1997). Indeed, culture plays several important roles in organisations.

Most obviously, an organisation's culture provides a *sense of identity* for its members (Greenburg & Baron, 1997). The more clearly an organisation's

shared perceptions and values are defined, the more strongly employees can associate themselves with their organisation's mission and feel a vital part of it.



**FIGURE 2.2 Culture in the Organisation**

Source: Kotter and Heskett (1992)

The second important function of culture is generating *commitment to the organisation's mission* (Greenburg & Baron, 1997). When there is a strong overarching organisational culture, employees feel that they are a part of the larger, well-defined whole and involved in the entire organisation's work.

A third important function of culture is that it serves to *clarify and reinforce standards of behaviour* (Greenburg & Baron, 1997). While it is essential for newcomers, it is also beneficial for seasoned veterans. In essence, organisational culture builds employees' words and deeds, making it clear what they should do or say in a given situation. In this way, it provides stability to



behaviour, both with respect to what one individual might do at different times, and also what different individuals may do at the same time.

Similarly, Schein (1988) identified three functions of organisational culture. In the first instance, it plays a role in solving the organisation's problems related to survival and adaptation in the external environment. The problems of external adaptation specify the coping cycle that any system must be able to maintain in relation to its changing environment.

Several problems of external adaptation are (Schein, 1986):

- *Mission and strategy*: obtaining a shared understanding of the core mission, primary task, manifest and latent functions.
- *Goals*: development of consensus on goals as derived from the core mission.
- *Means*: development of consensus on the means to be used to attain the goals as organisation structure, division of labour, reward system and authority system.
- *Measurement*: development of consensus on the criteria to be used in measuring how well the group is doing in meeting its goals such as the information and control system.
- *Correction*: development of consensus on the appropriate remedial or repair strategies to be used if goals are not being met.

In the second instance, culture plays a role in solving the organisation's problem related to the integration of its internal processes to ensure the capacity to continue to survive and adapt (Schein, 1986). The internal issues, described by Schein (1988), that must be dealt with by the group are:

- *Common language and conceptual categories*: members have to communicate and understand each other. If they cannot, a group is impossible, by definition.
- *Group boundaries and criteria for inclusion and exclusion*: an important area of culture is the shared consensus on who is in and who is out and by what criteria membership is determined.
- *Power and status*: every organisation must determine its pecking order, its criteria and rules for how one gets, maintains and loses power. Consensus in this area is crucial to help members manage feelings of aggression.
- *Intimacy, friendship and love*: every organisation must determine its rules of the game for peer relationships, relationships between sexes and the manner in which openness and intimacy are to be handled in the context of managing the organisation's tasks.
- *Rewards and punishments*: every group has to know what its heroic and sinful behaviours are; which get rewarded and which get punished.
- *Ideology and "religion"*: every organisation faces unexplainable events which must be given meaning so that members can respond to them and avoid the anxiety of dealing with the unexplainable and uncontrollable.

Finally, culture does more than solve internal and external problems. It also serves that basic function of reducing the anxiety that humans experience when they are faced with cognitive uncertainty or overload (Schein, 1986). It provides for a system for sorting out from the mass of input, those things that must be attended to and a set of criteria for reacting to them.



## 2.9 THE FORMATION, TRANSMITTANCE AND MAINTENANCE OF ORGANISATIONAL CULTURE

Now that organisational culture has been defined, described and the function thereof discussed, the focus moves to how it was initially created, transmitted and sustained.

### 2.9.1 THE CREATION OF ORGANISATIONAL CULTURE

Why do employees within an organisation share basic attitudes, values and expectations? Several factors contribute to this state of affairs (Greenburg & Baron, 1997):

- **Company founders.** Firstly, organisational culture may be traced, at least in part, to the founder/s of the company (Martin, Sitkin & Boeham, 1985, cited in Greenburg & Baron, 1997). These individuals often possess dynamic personalities, strong values and clear visions of how the organisation should operate. Since they are on the scene first and play a key role in hiring initial staff, their attitudes and values are readily transmitted to the new employees. This founding core group begins to act in concert to create the organisation. As the organisation grows the vision is expanded and a common history begins to develop (Martin, Sitkin & Boeham, 1985, cited in Greenburg & Baron, 1997).

The organisation in its early years would also be smaller, which makes it easier to adopt the founders' perspective on how things are done. The result is that these views become the accepted ones in the organisation, and persist long after the founders are no longer present.

- **Organisational experience.** Secondly, organisational culture often develops out of an organisation's experience with the external environment. Every organisation must find a niche for itself in its industry and in the

marketplace. As it struggled to do so in the early days, it may find that some values and practices do work better than others (Schein, 1985).

- **Internal interaction.** Thirdly, organisational culture develops out of contact between groups of individuals within an organisation (Weick, 1985 cited in Greenburg & Baron, 1997). To a large extent, culture involves shared interpretations of events and actions on the part of organisation members. Organisation culture reflects the fact that people assign similar meaning to various events and actions – that they come to perceive the key aspects of the world, those relevant to the organisation's work, in a similar manner (Weick, 1985 cited in Greenburg & Baron, 1997).

According to Schein (1988), the organisation's solutions to external and internal problems which have been found to work consistently for a group is then taught to new members as the correct way to perceive, think about and feel in relation to those problems. This again leads to the formation of a shared set of organisational values, philosophies and business strategies leading to the creation of an organisational culture.

Schein (1988), integrating the above facts, proposed two models for the creation of organisational culture. The *Social Trauma Model* that maintains that culture is learned essentially through two interactive mechanisms, namely (1) anxiety reduction and (2) pain reduction.

The second model, the *Success Model*, is based on 1) reinforcement and 2) positive reward. Schein believed that, from the beginning, a group would encounter basic anxiety that comes from uncertainty as to whether the group will survive and be productive and whether the members will be able to work with each other. Cognitive and social uncertainty is traumatic, leading group members to see ways of perceiving, thinking and feeling that they can share and make life more predictable. The founder may have his own preferred ways of solving these problems but these will only become embedded in the group if it shares in the solutions and sees how they work.



A problem with this learning mechanism is that, once employees learn how to avoid a painful situation, they continue to pursue this course without testing to see whether the danger still exists (Schein, 1988). The organisation that carefully engineers everything cannot find out whether customers would accept a less well-engineered and less costly product. Trauma-based learning is hard to undo because it hinders testing for changes in the environment (Schein, 1988).

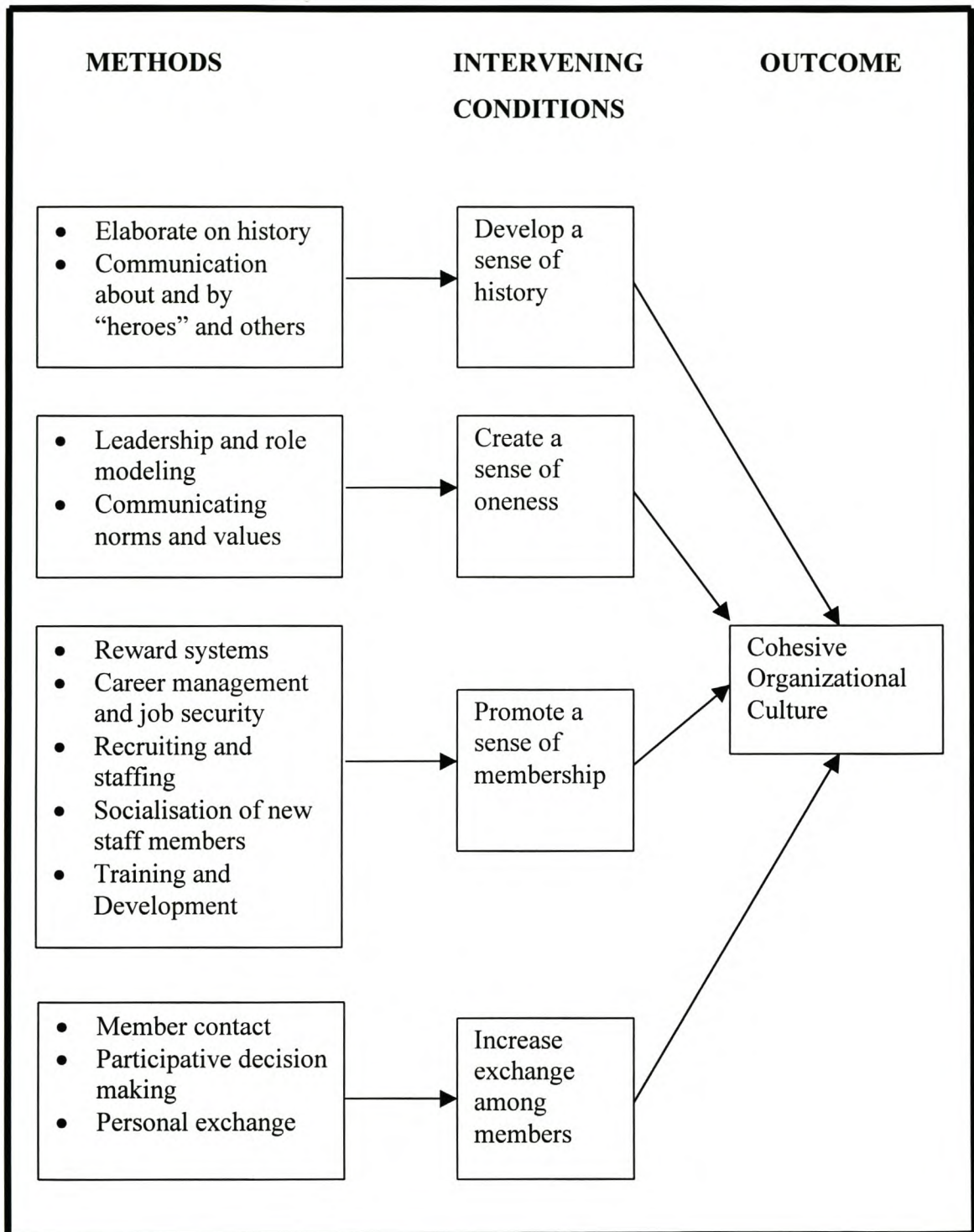
The second learning mechanism, *positive reinforcement*, implies that employees repeat that which works, and gives up that which does not work in the organisation (Weick, 1985 cited in Greenburg and Baron, 1997). If a company begins with its founder's belief that the way to succeed is to provide good service to customers and if that action is based on that belief and it succeeds in the marketplace, the group will learn to repeat whatever worked and gradually accept this as a shared view of how the world really is, thereby creating a piece of its culture (Greenburg & Baron, 1997).

This learning mechanism differs from trauma-based learning in that it produces responses that continually test the environment. It can, however, produce behaviour that is very resistant to change if the environment is inconsistent, producing success at one time and failure at another.

To conclude, culture seems to evolve over a period of time and Schein (1986, p. 83) describes this evolution as follows:

“The culture that eventually evolves in a particular organisation is ... a complex outcome of external pressures, internal potentials, responses to critical events and, probably to some unknown degree, chance factors that could not be predicted from a knowledge of either the environment or its members.”

A model that illustrates the evolution of organisational culture and its outcomes is presented in Figure 2.3. The model emphasises an array of methods and procedures that managers can use to foster a cohesive culture (Warren & Shichman, 1987).



**FIGURE 2.3 The Evolution of a Positive Culture**

Source: Warren & Shichman (1987)

As the culture forms around the initially recognised needs within the particular setting of the time and specific task requirements, it may be found to be functional. With time, however, the culture becomes a separate entity that is



independent of the initial reasons and incidents that helped to form it. The culture becomes distinct from the strategy, structure and other management systems of the organisation.

## 2.9.2 THE TOOLS FOR TRANSMITTING ORGANISATIONAL CULTURE

How are cultural values transmitted among people? In other words, how do employees come to learn about their organisation's culture? Research has shown that there are several mechanisms that are involved (Greenburg & Baron, 1997):

- **Symbols: Objects that say more than meets the eye.** Firstly, organisations often rely on symbols or material objects that connote meanings that extend beyond their intrinsic content (Dandridge, 1985 cited in Greenburg & Baron, 1997). For example, some companies use impressive buildings to convey the organisation's strength and significance, signifying that it is a large, stable place. Other companies rely on slogans, such as General Electric's "Progress is our most important product," or Panasonic's "Quest for zero defect" to symbolise their values. Corporate cars (or even jets) are also used to convey information about an organisation's culture, such as who wields power.

Research has shown that symbols are an important vehicle for communicating culture. For example, Ornstein (1986), in an interesting study, showed drawings of company reception areas to people and then asked them to evaluate what the companies pictured were like. She found that different types of symbols projected different images of the organisations' likely cultures. For example, firms in which there were lots of plants and flower arrangements were judged to have friendly, person-oriented cultures, whereas those in which waiting areas were adorned with awards and trophies were believed to be highly interested in achieving success. These findings suggest that material symbols are potent tools for sending messages about organisational culture.

- **Stories: “In the old days, we used to ...”** Organisations also transmit information about organisational culture by virtue of the *stories* that are told in them, both formally and informally (Neuhauser, 1993). Stories illustrate key aspects of an organisation’s culture, and telling them can effectively introduce or reaffirm those values to employees (Martin, 1982, cited in Greenburg & Baron, 1997). Some of the most effective stories involve recounting *critical incidents*, important events in shaping the company's history. It is important to note, however, that stories need not involve some great event, such as of someone who saved the company with a single wise decision, but may be small tales that become legends because they so effectively communicate a message. For example, employees at the British confectionery firm, Cadbury, are purposely told stories about the company's founding on Quaker traditions to get them to appreciate and accept the basic Quaker value of hard work.
  
- **Jargon: The special language that defines a culture.** Even without telling stories, the everyday language used in companies helps sustain the organisational culture (Greenburg & Baron, 1997). For example, the slang or *jargon* that is used in a company helps its members define their identities as members of an organisation. For example, employees at IBM for years referred to disk drives as "hard files" and circuit boards as "planar boards," terms that defined the insulated nature of their culture.

Someone who works in a human resources department may be found talking about the “CCMA” (Commission for Conciliation, Mediation and Arbitration), “TQM” (Total Quality Management), “CPM” (Computerised Performance Monitoring), “DSS” (Decision Support Systems), “EQ” (Emotional Intelligence), “NQF” (National Qualification Framework), “QWL” (Quality of work life), and other acronyms that sound odd to the uninitiated. Over time, as organisations or departments within them develop a unique language to describe their work, their terms, although strange to newcomers, serve as a common factor that brings together individuals belonging to a corporate culture or subculture.



- **Ceremonies: Special events that commemorate corporate values.** Organisations also do a great deal to sustain their cultures by conducting various types of *ceremonies*. Indeed, ceremonies may be seen as celebrations of an organisation's basic values and assumptions (Ott, 1989). Just as a wedding ceremony symbolises a couple's mutual commitment and a presidential inauguration ceremony marks the beginning of a new presidential term, various organisational ceremonies also celebrate some important accomplishment. As Deal and Kennedy put it, "Ceremonies are to the culture what the movie is to the script... values that are difficult to express in any other way." (1982, p. 63)
- **Statements of principle: Defining culture in writing.** A fifth way in which culture is transmitted is via direct *statements of principle*. Some organisations have explicitly written their principles down for all to see (Manely, 1991). Often an individual joins a firm without recognising or having prior knowledge of the type of environment in which he/she will place himself/herself, solely on the clear enunciation of a company's code of conduct. This statement of principles allows the employee to determine whether or not he/she believes that it would be congruent with his/her own.
- **Employee screening.** Potential employees may be screened according to how well their values and behaviour fit in with those that exist in the organisation (Peters & Waterman, 1982).
- **Personal identification with mentors.** The natural process of identification between younger and older members may encourage the younger members to take on the values and styles of their mentors (Donaldson & Lorsch, 1983).

### 2.9.3 THE MAINTENANCE OF ORGANISATIONAL CULTURE

The continuity of organisational culture is made possible by a number of factors, mostly concerning various dimensions of socialisation. Robbins (1990) suggests

that there are forces within the organisation, which act in such a way as to maintain the organisational culture. Three such forces are described and they are (Robbins, 1990): 1) the selection practices, 2) the actions of top management and 3) the organisation's employee socialisation methods.

Luthans (1992) describes the following socialisation tactics aimed at solidifying the acceptance of core values in order to ensure that the culture is maintained. Some of these practices are:

- Selection of entry level personnel who will fit in with the existing organisation culture.
- Job placement orchestrating a series of different experiences causing newcomers to decide whether they will be able to accept the organisation's norms and values.
- Job mastery, which involves reinforced field experiences often lasting for extensive periods of time.
- Measuring and rewarding performance, focusing on those aspects of the business that are crucial to success and corporate values.
- Adherence to important values which are designed to connect personal sacrifices employees have to make to higher human values such as serving society with better products and services.
- Reinforcing stories and folklore, which entails keeping alive stories that validate the organisation's culture and way of doing things, and recognition and promotion of those individuals who can serve as role models to new employees (Luthans, 1992).

Persons undergoing socialisation will respond both cognitively and emotionally. They will, to varying degrees, receive and understand the cultural messages being sent to them by the socialising agents. They will also, to varying degrees, agree with and emotionally accept these messages. Both these processes are



essential for accurate cultural transmittal for, without them, cultural content is unlikely to be internalised to guide future behaviour (Trice & Beyer, 1993).

Fillmore (1990, cited in Van der Post, 1997) asserts that the mechanisms and processes by which, and through which, corporate culture is transmitted, perpetuated and learned are intimately related. Organisational cultures are open systems, and they involve interconnected cycles of activities. Each cycle involves input, transformation and output. There are two major cycles of interaction. The first operates at the internal-external boundaries and involves the interplay of strategic business decisions, principals' philosophy of communications and social interactions among senior executives. The outputs are implicit beliefs and values which, when made explicit in the form of a statement of guiding principles, are referred to as core values. The second cycle operates internally and involves the interplay of five mechanisms. They serve to transmit the essence of the core values, while also helping to maintain the culture's internal equilibrium. The five mechanisms are (Fillmore, 1990, cited in Van der Post, 1997):

- i) Initiation rites, i.e. the orientation of new employees and the reorientation of existing employees.
- ii) Reinforcing rituals, i.e. actions by which valued behavioural acts are recognised, rewarded and reinforced.
- iii) Role models, i.e. individuals and groups whose deeds and actions are recognised and emulated.
- iv) Real and symbolic communication, i.e. the symbolic visual ways in which the values of the culture are communicated.
- v) Termination rites, i.e. the formal and informal processes by which employees are voluntarily or involuntarily retired from employment.

## 2.10 INTERVENING TO CHANGE A CORPORATE CULTURE

Changing a culture to increase a company's effectiveness is a hazardous undertaking. Consultants have an advantage in seeing corporate dynamics as vivid, unanticipated and different. Long-term members of a culture may take it all for granted and be so accustomed to some limiting conditions as to regard these as necessary and normal (Hampden-Turner, 1990).

But if outsiders see more, they can usually do less, since they are not well-known or trusted in the organisation. Cultural change should thus be a process in which the consultant or change agent helps the management of the organisation to act and implement changes.

The themes that appear in the discussions of organisational culture change are culture (Gibson, Ivancevch & Donnnelly, 1997):

- cultures are so elusive and hidden that they cannot be adequately diagnosed, managed or changed.
- because it takes difficult techniques, rare skills and considerable time to understand a culture and then additional time to change it, deliberate attempts at cultural change are not really practical.
- cultures sustain employees throughout periods of difficulty and serve to ward off anxiety. One of the ways they do this is by providing continuity and stability. Thus, employees will naturally resist change to a new organisational culture.

These three views suggest that managers who are interested in attempting to produce cultural changes face a difficult task. There are, however, courageous managers who believe that they can intervene and make changes in the culture. Figure 2.4 presents five intervention points for managers to consider.



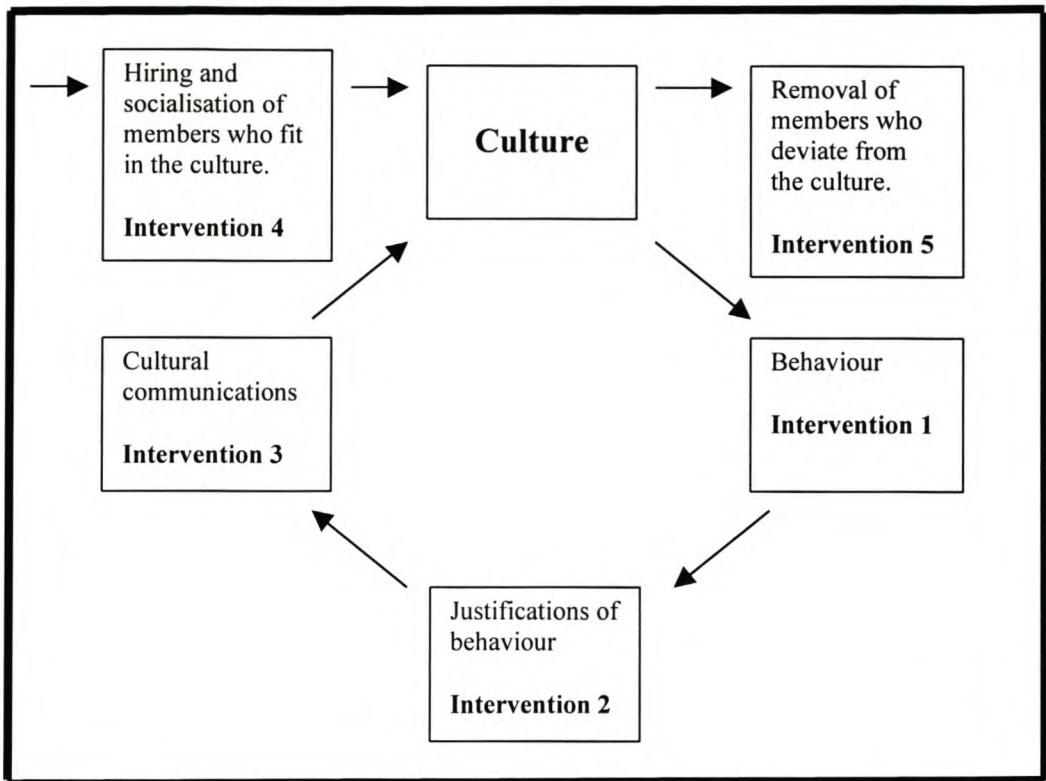
A considerable body of knowledge suggests that one of the most effective ways of changing employees' beliefs and values is to first change their behaviour, which is the first intervention (Gibson *et al.*, 1997). However, changing behaviour does not necessarily produce cultural change because of the process of justification. Managers must get employees to see the inherent worth in behaving in a new way (intervention two). Typically, communication (intervention three) is the method used to motivate the new behaviours. Cultural communications can include announcements, memos, rituals, stories, dress and other forms of communication. Another set of interventions includes the socialisation of new members (intervention four) and the removal of existing members who deviate from the culture (intervention five).

Each of these interventions must be introduced after careful diagnoses are performed. Although some individuals may not perfectly fit the firm's culture, they may possess exceptional skills and talents. Weeding out cultural misfits might be necessary, but it should be done only after weighing the costs and benefits of losing talented performers who deviate from the core cultural value system (Gibson *et al.*, 1997).

## **2.11 MEASURING ORGANISATIONAL CULTURE**

What gets measured, gets managed – for organisations to effectively understand and manage work culture, it has to be measured (Rollins & Roberts, 1998). Measurement allows organisations to compare actual organisational culture – the values and behaviours employee experience every day with the organisational culture to which the organisation aspires.

Measurement allows organisations to track change over time, including how much progress targeted change efforts are yielding. Measurement allows organisations to compare results from different units. And measurement allows organisations to look at the relationship between organisational culture and organisational performance.



**FIGURE 2.4 Changing Organisational Culture – Five Intervention Points**

Source: Gibson, Ivancevich & Donnelly (1997)

In addition to the difficulty of defining culture, problems also arise when researchers attempt to measure organisational culture (Petty *et al.*, 1995). Even though considerable attention has been directed toward organisational culture as an important feature of organisations, few attempts have been made to develop systematic measures of organisational culture (Reynolds, 1986).

This lack of effective measurement appears to be related to the nature of the definitions of the concept, most of which only permit qualitative research. As a result, the methods of measurement tend to be qualitative, descriptive and categorical, rather than quantitative (Petty *et al.*, 1995). If culture is defined as underlying values which can only be expressed, and so assessed, via symbols, myths and ceremonies, then the measurement must be qualitative. Usually, those who favour qualitative over quantitative research contend that cultural processes reflect a social construction of reality unique to the organisation and so are impossible to assess with standardised measures (Cooke & Rousseau, 1988).



The qualitative methods tend to be either descriptive or categorical. The descriptive methods characterise organisational culture and its effects observationally; they identify whether explanatory traits are evident within organisations. In this vein, Sherwood (1988) identified five characteristics of a 'high commitment' work culture, Barney (1986) described organisational culture by evaluating whether a strong set of core managerial values exists, and Camere and Vepsalainen (1988) distinguished four dimensions of organisational culture. In each case the method employed was a description by a primary observer.

The categorical methods are also based on observation with the boundary lines clearly drawn. Deal and Kennedy (1982) were the first to categorise culture as 'strong' versus 'weak', a view that was further developed by Clarck (1987). Saffold (1988) proposed an alternative categorisation based on measures of cultural dispersion and potency. Weiner (1988) classified companies based on a four-cell matrix that divided organisations by the strength of the value system.

As for empirical research, several attempts have been made to assess organisational culture quantitatively. Denison (1984) constructed a questionnaire to measure managerial style as employees' participation. Reynolds (1986) developed an instrument to capture aspects of organisational culture and the perceived work context of the individual, while Cooke and Rousseau (1988) proposed the Organisational Culture Inventory as a means of assessing culture in terms of behavioural norms and exceptions. Goll and Sambharya (1990) measures culture in terms of top management ideology. Hall (1996) proposed the *competence process* theory on which the Organisational Culture Analysis (OCA) is based. This led to the development, by Teleometrics International, of the Organisational Competence Index (OCI) as measure of organisational culture.

As a result, it can be argued that the two perspectives on the measurement of organisational culture are at least complementary (Petty *et al.*, 1995). Qualitative measures which focus on the elements of organisational culture manifested in myth, story and ritual can be seen as long-term measures. Quantitative measures, on the other hand, may allow researchers to assess

whether attempts at changing culture are currently effective. These short-run measures may give those who are implementing the change some level of intermediate feedback on the progress.

## **2.12 SUMMARY**

Success in business is not determined by the skills of the executives alone, nor by the visible features of the organisation. The organisation has an invisible quality – a certain style, character or way of doing things – that may be more powerful than the leadership of any one-person or organisational system.

The chapter began with an overview of the history and development of organisational culture as concept and research topic, which was followed by a discussion of the organisational culture and climate debate. To understand organisational culture more fully, the concept was further defined and conceptualised with the help of a number of models.

At the root of any organisation's culture is a set of core characteristics that are collectively valued by members of an organisation. These were further discussed.

Considering the definitions of organisational culture, it is striking to realise that organisational culture is an intangible force, but one with far-reaching consequences. Some of the more important roles and functions of organisational culture in organisations also received attention.

The focus of the chapter then moved to the creation, transmittance and maintenance of the organisational culture and was followed with a model that proposed five intervention points that managers can use to bring about organisational culture change. The chapter concluded with a brief discussion of the various perspectives that exist in the measurement of organisational culture.



## **CHAPTER 3**

# **THEORETICAL PERSPECTIVES OF ORGANISATIONAL PERFORMANCE AND THE RELATIONSHIP THEREOF WITH ORGANISATIONAL CULTURE**

### **3.1 INTRODUCTION**

People are obsessed with measuring performance in every field of human endeavour (Lothian, 1987). A mother's concern with her infant's development (usually measured in weight), a child's progress at school (marks achieved), an athlete's competitive edge (time recorded or distance measured), a shareholder's stake in a company (the quoted share price), political popularity (share of poll), etc., are only a handful of everyday examples of how people design yardsticks with which to measure performance. The need to measure organisational performance, therefore, is no exception.

Understanding organisational culture, as the discussion in chapter two has shown, requires a high tolerance for complexity and ambiguity (Denison, 1990). Unfortunately, the literature on criteria for organisational effectiveness or performance is equally complex and ambiguous, due to the fact that many of the demands placed by performance criteria are contradictory to one another (Van der Post, 1997).

Organisations inevitably have an array of stakeholders and any particular measure of performance often tends to pit one against the other. Shareholders prefer dividends, but managers regard dividends as costs and would rather have profits, growth and potential (Denison, 1990). Improved technology and cost cutting may improve productivity, but may also cost employees their jobs. In the same manner, concerns over quarterly performance have the potential of

compromising long-term investment. This inevitable set of trade-offs led several authors to argue that organisational effectiveness represents an inherent paradox (Cameron, 1986; Quinn, 1988).

The objective of this chapter is to briefly review the literature regarding the criteria in terms of which organisational effectiveness may be evaluated. This chapter further reviews several of the major perspectives on effectiveness and then discusses the approach that was taken for the purposes of this study.

The second half of the chapter discusses the theoretical relationship between the two variables, organisational culture and organisational performance, as proposed by the *competence process* theory.

### 3.2 MODELS OF ORGANISATIONAL EFFECTIVENESS

The first question in any formulation or conceptualisation of effectiveness is probably “effectiveness for whom?” (Van de Ven & Ferry, 1980). Conceptually, this fundamental question implies a set of stakeholders or constituents who have interests that may be overlapping, compatible, opposed or even mutually exclusive (Ross, 1980). Constituents may include suppliers, customers, employees, stockholders, financial institutions, regulatory agencies or the general public, to name but a few. If an organisational perspective is taken on the constituent model, the coalitions within an organisation may also be regarded as stakeholders who serve to define differing forms of organisational effectiveness (Pfeffer, 1982).

Various authors have proposed several conceptual frameworks for organisational effectiveness. In summarising the literature with respect to these conceptual frameworks, several of the basic models will be discussed.

The first of these models, the *natural systems model*, is based on the biological metaphor of an organism which has an internally differentiated and integrated



structure that is interdependent with its environment for information and energy (Miller, 1978; Katz & Kahn, 1978). As Miller (1978) points out, this belief implies that organisations do not have simple goals, but should rather be evaluated with respect to the equilibrium and elaboration of the system itself. Given this perspective, the outcomes of primary interest are system characteristics such as growth, stability or decline.

A second approach, the *goal attainment model* (also known as the *rational systems model*) equates effectiveness with the attainment of specific organisational objectives (Denison, 1990). Goals or objectives may be a set of narrow economic objectives defined by the owners, or they may be the set of institutional goals defined by the organisation's constituents. In either case, organisations are perceived as contrived, instrumental and purposeful. This perspective is attractive because it accounts for the sense of purpose that is apparent in many organisations, but is often criticised because goals change quickly (Weick, 1979). Goals may also be internally inconsistent or even contradictory. All of these problems are difficult to resolve within the bounds of the rational goal attainment model of effectiveness.

A third model proposed by many theorists is the *decision process model*. The central image in this model is that organisations are primarily information-processing and decision-making entities and that the characteristics of this process will be the foremost determinants and indicators of effectiveness (Denison, 1990). This model would encompass the work of theorists ranging from Likert (1967) to Vroom and Yetton (1973), all of whom argued that the nature of an organisation's decision-making processes was a prime indicator of effectiveness.

A fourth model, the so-called *stakeholder model*, helps to underscore the diversity of interests among relevant parties. Although these differing interests are often engaged in an inherent conflict which cannot be reconciled, a number of authors have studied the problem of the functional characteristics of organisational systems that are successful in integrating diverse interests (Katz & Kahn, 1978).



A number of authors have criticised these theories of organisational effectiveness, arguing that they all overemphasise the importance of the internal characteristics of organisations or the proactive efforts of individual members in organisations as determinants of effectiveness (Pfeffer, 1982). Instead, they argue that what is needed is a set of theories that defines effectiveness as a reactive, rather than a proactive process (Van de Ven & Astley, 1981).

The two most prevalent theories established on the above stance is the *resource dependent* perspective of Pfeffer and Salancik (1978) and the *population ecology* perspective of Hannan and Freeman (1977). The *resource dependence model* argues that the prime determinants of the behaviour of organisations are their attempts to control their external environment so as to secure those resources that are most critical to the organisation's survival and growth (Pfeffer & Salancik, 1978). Organisational members of course, enact these behaviours, but the primary source of motivation comes, not from the maintenance or development of the organisation's internal system, but from the organisation's reactions to the external environment.

The *population ecology* perspective is an even more reactive theory of organisational effectiveness. The central principle is that the environment determines which types of organisations will survive and which will not and that the actions of individuals and organisations are relatively weak determinants of effectiveness (Hannan & Freeman, 1977). Certain species of organisations will grow to fill a particular niche and will decline accordingly when the demand for that particular type of organisation diminishes. This theoretical perspective helps to establish a context within which the effectiveness of a particular firm might be analysed, but does little to explain the fate of a particular firm within a given niche.

This brief overview of the various models of organisational effectiveness to be found in the literature should make the paradox and complexities of this topic readily apparent to the reader.



### 3.3 THE CHOICE OF A MEASURE FOR ORGANISATIONAL PERFORMANCE

Based on the conceptualisations of organisational effectiveness, a number of measures have been developed to quantify the concept.

Campbell (1977) identified the following measures of organisational effectiveness that have been applied by various researchers and have stood the test of time. They are summarised as follows:

- *Overall effectiveness.* A general evaluation that takes into account as many criteria as possible.
- *Productivity.* Usually defined as the quantity or volume of the major product or service that the organisation provides. It can be measured at three levels: individual, group and organisational.
- *Profit.* The revenue from the sales left after all costs and obligations have been met.
- *Quality.* The quality of the primary service or product provided by the organisation, which may take many operational forms that are largely determined by the kind of product or service offered by the organisation.
- *Accidents.* The frequency of on-the-job accidents resulting in lost time.
- *Growth.* Represented by an increase in such variables as total manpower, plant capacity, assets, sales, profits, market share and number of innovations.
- *Absenteeism.* The usual definition stipulates unexcused absences, but, even within this constraint, there are a number of alternative definitions, for example, total time of absence versus frequency of occurrence.

- *Turnover.* Some measure of the relative number of voluntary terminations.
- *Job satisfaction.* This has been conceptualised in many ways, but most authors define it as the individual's satisfaction with the amount of various job outcomes that the employee receives.
- *Motivation.* The strength of the predisposition of an individual to engage in goal-directed action or activity on the job.
- *Morale.* Is conceptualised as group phenomenon involving extra effort, goal communality, commitment and feelings of belonging.
- *Control.* The degree and distribution of management control that exists within an organisation for influencing and directing the behaviour of organisation members.
- *Conflict / Cohesion.* Defined at the cohesion end by an organisation in which the members like each other, work well together, communicate fully and openly and co-ordinate their work efforts. At the other end of the continuum lies the organisation with verbal and physical clashes, poor co-ordination and ineffective communication.
- *Flexibility / Adaptation.* Refers to the ability of an organisation to change its standard operating procedures in response to environmental changes.
- *Planning and Goal Setting.* The degree to which an organisation systematically plans its future steps and engages in explicit goal-setting behaviour.
- *Goal Consensus.* Distinct from actual commitment to the organisation's goals, consensus refers to the degree to which all individuals perceive the same goals for the organisation.



- *Internalisation of Organisational Goals.* Refers to the acceptance of the organisation's goals. It includes the belief that the organisation's goals are right and proper.
- *Role and Norm Congruence.* The degree to which the members of an organisation are in agreement on such things as desirable supervisory attitudes, performance expectations, morale, role requirements and so on.
- *Managerial Interpersonal Skills.* The level of skill with which managers deal with superiors, subordinates and peers in terms of giving support, facilitating constructive interaction and generating enthusiasm for meeting goals and achieving excellent performance.
- *Managerial Task Skills.* The overall level of skills with which the organisation's managers, commanding officers or group leaders perform work-centred tasks, therefore tasks centred on the work to be done.
- *Information Management and Communication.* Completeness, efficiency and accuracy in analysis and distribution of information critical to organisational effectiveness.
- *Readiness.* An overall judgement concerning the probability that the organisation could successfully perform some specified task if asked to do so.
- *Utilisation of Environment.* The extent to which the organisation successfully interacts with its environment and acquires scarce and valued resources necessary to its effective operation.
- *Evaluation by External Entities.* Evaluation of the organisation, by the individuals and organisations in its environment with which it interacts.
- *Stability.* The maintenance of structure, function and resources through time and, more particularly, through periods of stress.

- *Value of Human Resources.* A composite criterion that refers to the total value or total worth of the individual members, in an accounting sense, to the organisation.
- *Participation and Shared Influence.* The degree to which individuals in the organisation participate in making the decisions that directly affect them.
- *Training and Development Emphasis.* The amount of effort the organisation devotes to the development of its human resources.
- *Achieving emphasis.* An analogue to the individual need for achievement referring to the degree to which the organisation appears to place a high value on achieving major new goals.
- *Efficiency.* A ratio that reflects a comparison of some aspect of unit performance to the costs incurred for that performance.

Ivancevich (1992) identified and described the following *Human Resource Evaluation Ratios* to determine organisational performance:

*Effectiveness Ratios:*

- Ratio of number of employees to total output – in general.
- Sales in dollars per employee for the whole company or by organisational unit (business).
- Output in units per employee hour worked for the entire organisational unit.
- Scrap loss per unit of the organisation.
- Payroll costs by unit per employee grade.

*Accident Ratios:*

- Frequency of accident rate for the organisation as whole or by unit.
- Number of accidents that lead to time-loss.
- Compensation paid per 1000 hours worked for accidents.
- Accidents by type.
- Accidents classified by type of injury to each part of the body.



- Average cost of accidents by part of the body involved.

*Organisational Labour Relation Ratios:*

- Number of grievances filed.
- Number of arbitrations lost.

*Turnover and Absenteeism Ratios:*

- Attendance, a tardiness and overtime comparison by organisational unit as a measure of how well an operation is handling employees.
- Employee turnover by unit and for the organisation.

*Employment Ratios:*

- Vacations grants as a percentage of employees eligible.
- Sick leave days granted as a percentage of labour days worked.
- Military leave granted per 100 employees.
- Jury duty leave granted per 100 employees.
- Maternity leave granted per 100 employees.
- Educational leave granted per 100 employees.
- Personal leave granted per 100 employees.
- Employment distribution by chronological age.
- Employment distribution by length of service with organisation.
- Employment distribution by chronological age, sex, race, national origin, religion.
- Average age of the work force.
- Average age of managerial work force.

Klatt, Murdick and Schuster (1985) proposed the following measures to determine organisational performance:

*Effectiveness measures:*

- Physical output per worker-hour.
- Physical output per year for a specific organisation.
- Physical output per manager.
- Payroll costs per unit of physical output.

- Number of promotions divided by the number of employees.
- Reduction in the number of grievances filed.
- Employee attitude ratings of company work conditions.

*Ineffectiveness measures:*

- Scrap losses per organisational unit.
- Accidents per organisation (number and seriousness)
- Lost time due to accidents.
- Number of grievances lost in arbitration.
- Employee turnover.
- Lost time due to tardiness.
- Sabotage incidents per organisational unit.
- Average days of sickness per employee.

*Efficiency measures:*

- Dollar value of cost reductions per employee.
- Number of contracts or customers served on-schedule and within budgeted costs.
- Increase in dollars of sales per employee.

*Intervening variables in organisational performance:*

- Average age of workers, managers and non-managers.
- Employee job satisfaction as measured by attitude surveys.
- Length of service of employees by class of work.
- Employment distribution by sex, race, ethnic group, and manager / non-manager.
- Salary and wage structure ratios.
- Number of employees enrolled in educational programmes.
- Amount company spends per year on education and training per employee.
- Number of patents per employee.
- Number of days' leave granted per employee.
- Number of workdays spent at professional meetings per employee.
- Quit rate.



Kahn (1977) stated that, notwithstanding the substantial agreement on outcome variables as the defining components of organisational effectiveness and performance, their limitations have to be recognised insofar as the development stage of the organisation itself and the environment in which it operates, are concerned.

It is further unlikely that an organisation will be performing effectively on all measures of effectiveness and performance, as the assessments are very much dependent upon whose perspective is used in assessing effectiveness, the time employed and the standard of comparison used (Arnold & Feldman, 1986).

### **3.4 GUIDELINES FOR ASSESSING ORGANISATIONAL EFFECTIVENESS**

Cameron and Whetten (1983) proposed that it is more worthwhile to develop frameworks for assessing organisational effectiveness than to try to develop theories of effectiveness. This belief was based on the conclusion that they came to, that there cannot be one universal model of organisational effectiveness.

Cameron and Whetten (1983) offered the following guidelines for assessing organisation effectiveness:

- Effectiveness should be defined and assessed from a particular point of view and that viewpoint should be made explicit.
- Organisational domains are circumscribed by the constituencies served, the technologies employed and the services or outputs produced. When effectiveness is analysed, it is therefore important that the domains being assessed are clearly specified.
- Judgements about effectiveness can be made at the individual, the sub-unit, the organisational, the industrial or the societal level. The appropriateness

of the level depends on the constituency used, the domain being focused on and the purpose of the evaluation.

- The purpose of judging effectiveness helps to determine the appropriate constituencies, domains and levels of analysis. A clear conception of purpose is therefore important.
- The selection of the time is important because long-term effectiveness may be incompatible with short-term effectiveness. This is due to the fact that judgements of effectiveness are always made within the context of a particular time frame.
- The choice of data is between objective data (organisational records) or subjective, perceptual data (interview or questionnaire responses). The selection of data by which to judge organisational effectiveness is important because an organisation may be judged effective on the basis of subjective perceptions, while objective data may indicate that the organisation is in fact ineffective.
- There are a variety of referents or standards against which organisational effectiveness and performance can be judged. These are (Cameron & Whetton, 1983):
  - Comparative judgements,
  - Normative judgements,
  - Goal-centred judgements,
  - Improvement judgements, and
  - Trait judgements.

### **3.5 CHOICE OF PERFORMANCE CRITERIA**

Ever since the abandonment of barter as a means of exchange, money has been the common denominator adopted as the method of transacting business



(Lothian, 1987). Identify a person, a department, a product or process and the accounting system will provide a financial indicator (a budget, cost, or variance) with which that entity's performance can be assessed (Lothian, 1987). Because of the all-pervasive nature of accounting as the language of business, financially based indicators are universally adopted to measure organisational performance

Taking the above-mentioned arguments and proposed measures into consideration, it was decided to use the following three objective performance criteria:

- 1) Financial profits
- 2) Stock losses
- 3) Labour turnover - (indicative of the voluntary survival rate).

The three measures that were used to determine organisational effectiveness and performance should not be viewed as an attempt to negate the other possible indicators of organisational performance, but a choice had to be made from the performance indicators proposed above and based on various arguments, that will be provided below.

### **3.6 MOTIVATION FOR USING OBJECTIVE PERFORMANCE CRITERIA**

After considering the numerous proposals for measurement that may be used to determine organisational effectiveness and performance mentioned above (Campbell, 1977; Ivancevich, 1992; Klatt *et al.*, 1985), a choice had to be made as to which of them would be used for the purposes of this study.

In making this decision, it was decided that this study should get back to the basics. It was felt that commercial organisations ultimately have one important "bottom line"; to create wealth for all associated with the organisation and therefore to be financially successful.

Thus, the indicators of organisational performance that were used, namely: 1) financial profits; 2) stock losses and 3) labour turnover are all directly relevant and based on the so-called financial “bottom line” of the organisation. These indicators of performance all have a direct impact on the financial success and overhead costs of the organisation.

The indicators referred to above are further objective measures and can often be obtained from published organisational records. It was felt that it would be more appropriate to use quantitative data, rather than subjective, perceptually based qualitative data, in an attempt to increase the objectivity of the performance measure. Furthermore, the chosen data would not pose a risk to the participating organisations if it were to become publicly known, as it is not security-sensitive information.

Viewing the organisation as a system, it is also more appropriate to use such financially based hard data because it offers a more appropriate basis with which to measure organisational performance (Van der Post, 1997). This is based on the premise that financially based data forms an integral part of the various dimensions found in a system. Firstly, from a structural viewpoint, the financially based considerations are evident in the nature of many entities that are incorporated in the system. Secondly, seen from a process perspective, the financially based aspects impact on, and is one of, the manifestations of the dynamic relationship between the various entities found in the system. Thirdly, using a functional perspective, the financially based aspects will impact on various entities’ perceptions of an organisation’s effectiveness and as such will have a very real impact on the continuous existence of the organisation.

As such, a powerful argument can be put forward that financially based data provide a sound basis on which to make inferences about effectiveness.



### **3.7 THE RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE AND ORGANISATIONAL PERFORMANCE**

Most of the published research on organisational culture has emphasised the central importance of values and beliefs that lie at the core of an organisation's social system (Denison, 1990). The topics of interest that are found to be most prevalent have been the ways in which organisations develop and maintain their central values and the behavioural patterns that accompany them, or the manner in which these values and behaviours are transmitted to new members of an organisation (Denison, 1990).

Many studies, a number of which have been mentioned elsewhere, have helped to define the meaning of organisational culture, to identify the relevant issues raised by the concept and the emerging research style. In the same manner, other studies have helped to define organisational effectiveness or performance and the issues raised by this concept.

Few publications, however, have attempted to quantitatively explore the interrelations between the concepts organisational culture and organisational performance (Rollins & Roberts, 1998). The authors who address, and have addressed, this topic represent a curious mix of academics and consultants, and their research usually involved close collaboration with the managers and organisations they studied (Rollins & Roberts, 1998). Each of these works was rooted, to some degree, within the academic discipline of organisational behaviour and organisational psychology theory, although the research, strictly speaking, could not always be referred to as being academic (Kotter & Heskett, 1992). The "evidence" most often consisted of stories and anecdotes that are entertaining but not always convincing. Each book seems to rise and fall, according to the author's insight, intuitive ability to integrate and simplify, and talent at turning a phrase. Very little data is presented to support their contentions (Hoffstede, 1991).

Very few of these studies, for example, have followed a pattern of first formulating a set of criteria that would capture their "theory" of what makes



organisations tick, and then going out to gather some information to see whether they were right or wrong (Hoffstede, 1991). According to Hoffstede (1991), this disregard for the criteria of "normal science" represents both a strength and a weakness of these studies.

Unencumbered by research designs, instruments, and procedures, they breathe life into the organisations that they study in a laudable fashion that is nearly unprecedented among those who write about management and organisations (Hoffstede, 1991). Nonetheless, without some basis for comparing organisations at arm's length, it is difficult, if not impossible, for a reader to decide whether the author's evidence or the author's arguments convince him or her. A position of advocacy, rather than inquiry, further clouds this issue (Kotter & Heskett, 1992).

The following studies are internationally the most well-known quantitative studies normally cited: Collins and Porras (1994), Denison (1990), Gordon and DiTomaso (1992), Kotter and Heskett (1992) and Petty *et al.* (1995). The other relevant studies were all based on case study evidence (e.g. Peters & Waterman, 1982). These studies concluded that organisational culture does contribute to organisational performance, even though none of these studies was able to provide compelling evidence of this relationship (Greenburg & Baron, 1997).

Only one such study conducted in South Africa could be found, which was also inconclusive. This study therefore attempts to make a contribution in this field, specifically in the South African context, using a different theory as a basis for this relationship, as well as using a different performance measures and a different measuring instrument for organisational culture.

Linking the behavioural patterns of employees with the underlying assumptions, beliefs and values of an organisation is an important, but often neglected, step in the study of organisational culture and performance (Denison, 1990). The values, beliefs and assumptions held by the organisation produce a set of behaviours – concrete activities that are rooted in the dominant values and beliefs of the organisation. This fact explains why it is so difficult to separate



the core values and beliefs held by the organisation and the behavioural patterns that are supported by them.

Most of the authors that have presented ideas on the relationship between organisational culture and organisational performance have attributed the success of the organisation to a combination of values and beliefs, on the one hand, and policies and practices, on the other, and the relationship between these two and success (Rollins & Roberts, 1998).

It was necessary that a theoretical relationship be established before an attempt was made to establish a statistical one. This theoretical relationship is based on the explanation proposed by Hall (1996) in the *competence process* theory.

### 3.8 ORGANISATIONAL COMPETENCE AND PERFORMANCE

Hall (1996) described the relationship between organisational competence and organisational performance in terms of the following equation:

$$\text{Performance} = \text{Potential} - \text{Interference}$$

The current performance of an organisation reflects the amount of available potential which actually *finds expression* in job accomplishment (Hall, 1996). Therefore, high performance requires maximum potential coupled with minimal interference. Hall (1996) further believes that the amount of potential that is allowed expression and the amount of interference that hinders this expression of potential, stems from the conditions of work or organisational culture provided by management. On an individual level, the relationship between individual competence and organisational productivity is expressed as follows:

$$\text{Productivity} = f(\text{Human Competence} \times \text{Conditions of Competence})$$

The Organisation Culture Analysis (OCA) is a process by which both the potential available, and any interference operating on the organisation, is identified. The OCA makes use of the Organisational Culture Index (OCI) to analyse the organisational culture that prevails in the organisation in terms of: the policies; priorities; and leadership practices.

In this analysis, the employees describe the organisational culture as they currently perceive it – the so-called "ACTUAL" conditions - and as they would like it to be in order for them to do their best work - the so-called "DESIRED" conditions. The actual conditions reflect the current organisational culture prevalent in the organisation, while the desired conditions reflect the employee's aspirations and needs to do their best. Such conditions indicate the amount of potential available to the organisation in pursuing performance objectives. The ratio of Actual / Desired conditions indicates how much potential is being utilised in current levels of performance and can be used to motivate the implementation of interventions to change the organisational culture to one that will free the available potential.

Based on the competence theory proposed by Hall (1996) it can be hypothesised that the dimensions of organisational culture or competence – *collaboration*, *commitment*, *creativity* and the supporting conditions thereof, are directly proportional to the potential for performance. This view forms the theoretical basis of this study.

### 3.9 AN OVERVIEW OF THE COMPETENCE PROCESS

After giving the above overview of the concept *organisational culture*, it would be appropriate at this point to briefly provide an overview of the *competence process* theory, as a conceptualisation of organisational culture and as explanations of the organisational culture-performance link. The instrument that is used, for the purposes of this study, to measure organisational culture is also based on this theory. The theory of Organisational Competence is



comprehensively described in the book: *The Competence connection – A blue print for excellence* written by Jay Hall, PhD (1996).

As was already mentioned above, this study did not attempt to prove causality, it merely describes the dimensions of organisational culture and associates them with those of organisational performance. If a statistical relationship were to be found by this study, it would still not prove causality due to the fact that the chosen research methodology would not allow such an inference.

### **3.9.1 COMPETENCE: THE BASIC PREMISE**

The *Competence Process* is a different way of looking at leadership, and the dynamic processes that prevail in organisations. It, furthermore, clarifies some of the anomalies that have marked many of the behavioural science theories of leadership and refocuses the perennial problems of productivity and morale (Hall, 1996). As a classification tool, it integrates many of the most noteworthy theoretical and empirical contributions to leadership theory and creates a context within which the familiar works can be interrelated. As an evaluative tool, it establishes a frame of reference for appropriately bringing to bear a seemingly diverse group of theories on general problems of productivity and morale. And, as a plan for action, it provides a road map or a leadership system, to get the organisation and individual from a current position to a desired position (Hall, 1996).

If one assumes that employees are capable of doing what needs to be done, managers must ask themselves the following questions: What have leaders done to allow expression of this basic competence? Why, if people are capable, do they sometimes fail to do what needs to be done? When people do *not* do what needs to be done, is it because they cannot? Or is it because leaders have created an organisational context which makes it impossible or unrewarding for them to express their individual competence? Have we organised and managed as if competence was a fact of organisational life, or is incompetence presumed and

managed around it? These questions need to be carefully considered.

Leaders often tend to equate competence with productivity. But, productivity is only a symptom of a larger problem (Hall, 1996). If one infers incompetence from lower than desired productivity, one could arrive at an erroneous conclusion because the logic is not so straightforward and parallel (Hall, 1996). It is easy to assume competence when productivity is good, but not so easy to conclude incompetence from low productivity. Low productivity can be, and most often is, a sign of competence that exists, but which is not allowed expression.

In our search for simple explanations of complex events, leaders tend to look at the symptomatic index, productivity, and when it is low, to leap to the conclusion that inadequate employees are responsible. Hall (1996) proposes that one should first examine the context within which the employees must function, because, for example, inadequate leadership could also be responsible for low productivity. Managers are too often inclined to curse the tree for the quality of its fruit rather than to look at the soil in which it must grow.

### **3.9.2 COMPETENCE AND ADAPTIVE FITNESS**

Human competence has been a shadow truth, unheralded but nevertheless all about us. Mankind has survived and prospered as a species because it has been capable of doing what needs to be done, and been able to deal productively with other people and the environment (Hall, 1996).

Long before any manager enters an organisation, he/she has acquired problem solving skills and numerous coping mechanisms that sees him/her through the demands of each day. People *learn* to be competent as a natural part of their development. As environmental demands change, people must adapt to meet these new demands and they must therefore be adaptively fit. Personal competence determines the *adaptive fitness* of the individual. Adaptive fitness is



therefore simply the individual's fitness to live, eat, prosper and continue to exist in the world (Hall, 1996). This fact leads to the conclusion being drawn that adaptivity is the ultimate issue of physical and psychological survival.

The fact that man has survived thus far is irrefutable evidence of mankind's individual adaptive fitness and capacity to respond productively to the demands placed on himself / herself by the physical and social environments (Hall, 1996). The more effectively he/she adapts, the longer he/she will survive. The individual who, for whatever reason, is constrained in his or her adaptive capability, is less prepared to interact effectively with the environment and thus is impaired for physical and/or emotional survival (Hall, 1996).

In mental health circles, the competent individual is one who is equipped with adaptive skills, and competent individuals comprise the vast majority of the human race. The truly incompetent individual is one who is unhealthy and who does not possess, psychologically, the necessary adaptive skills. Individual competence, not incompetence, is the norm and accounts for all but a small percentage of the population and it is upon this widespread capacity that the *Competence Process* is founded (Hall, 1996).

For leaders, it is important to recognise that, if the individual's ability to adapt is a function of his or her competence, the same may be said about social systems that are engaged in complex ways of doing work. Trying to harness this basic individual competence which is the key to adaptive fitness, this assurance of survivability, is really what civilised structures are all about (Hall, 1996). It is what the task of leadership and management is all about.

Leaders do not create competence, but they do control the expression thereof by means of the organisational context that they create (Hall, 1996). To achieve organisational competence is to maximise the expression of the innate competence of the employees who make up the organisation. Leaders cannot take either the credit or the responsibility for the competence of those they manage; personal competence, for leader and worker alike, exists irrespective of organisations. It is a fundamental part of human potential. But leaders decide

whether or not competence and individual potential will be expressed (Hall, 1996).

### 3.9.3 THE COMPETENCE MOTIVE

The leader's or manager's job of releasing potential and facilitating the expression of individual competence is made easier by the fact that people are *ready to do so* and that there is *a competence motive* among people (Hall, 1996). Psychologists like Robert White (1959), Erik Erikson (in Evans, 1969) and Brewer Smith (1969), have all noted that, in addition to the basic *capacity* to do that which is refined and developed on the basis of individual learning, there is also a personal *need* to do so.

People *want* to be competent. People need to do their best, to function well so that, having demonstrated their capacity for doing well, they realise their own potential and reap unto themselves the rewards of competent performance. The reward is the simple but profound feelings of efficacy and personal worth that comes from work well done (Hall, 1996). When people do what needs to be done, when they demonstrate personal competence, they feel good about themselves. An opportunity to realise personal potential is therefore a powerful incentive.

Biologically, competence is tied to the very physical need to survive. But, psychologically competence has to do with the simple straightforward personal reward of self-worth. When people behave competently, when they have done what needs to be done, they derive from it a sense of fulfilment and personal worth. They have demonstrated that they are adequate to their tasks and that they have "worked" as individual human beings because they have produced or accomplished something (Hall, 1996).

People, being pleasure-seeking in the practical and constructive sense of the word, seek through competent performance what psychoanalyst Erik Erikson (in



Evans, 1969) calls "self-verification" and Brewster Smith (1969) terms "self-respect." Leaders dictate whether people can expect such fundamental rewards in their organisations, and hence, the probability of realising potential though competent performance.

### 3.9.4 CREATING A CULTURE FOR COMPETENCE

If the whole idea of individual competence is applicable within formal organisations or within systems assembled to accomplish certain objectives, and if leaders play a critical role in the unfolding process, then what must they, as organisational leaders, do to be responsive to this capability? Of equal importance, how can they be responsive to the human *need* to do what needs to be done? Are traditional organisational provisions consistent with the unconstrained expression of personal competence? Is what leaders have traditionally provided consistent with the need that each individual has to display his or her competence? Have leaders organised and managed on the basis of the simple premise that people can, and will, do what needs to be done? More often than not the answer seems to be "No!" (Hall, 1996) Leaders have organised themselves according to theories and practices which, at best, overlook the obvious and, at worst, presume incompetence as the norm (Hall, 1996).

This need not be the case. As it is necessary for individuals to adapt and to survive, so is it necessary for organised systems to adapt to changing environments in order to survive. Since organisations are made up of employees who already possess the abilities and needs to be competent, leaders must examine the basic issue of whether the organisational culture allows for the expression of basic competence (Hall, 1996). Leaders must tend to the soil and learn how to organise and manage organisational environments so that it allows, and encourages, the expression of competence. To do this, the fundamental nature of competent performance, and thus the components of competence, must be examined.

### 3.9.5 COMPETENCE: ONE PART CREATIVITY AND ONE PART COMMITMENT

*Responding* in a productive manner to the social and physical demands of the environment is the essence of competence (Hall, 1996). There is a *competent response*, and this competent response is characterised by equal parts of *creativity* and *commitment*.

Part of adaptive fitness involves the solving of problems. To respond competently to the problems they encounter, people must be able to sense the meanings of events, and literally *create* appropriate ways of responding (Hall, 1996). They must be able, for example, to perceive the nature of environmental demands in a fairly accurate way and be able to understand and interpret accurately the meaning of whatever task is to be done. Then, they must come up with, literally *invent*, an on-the-spot response to the demand. They must further be able to foresee the consequences of their acts and to anticipate the nature of the future environment in a creative fashion, if they are to adapt to future demands.

This means that, when confronted with a problem, people first of all have to be able to identify the problem accurately and to search back into their repertoire of behaviours to see what they have to bring to bear on the problem. It may even mean that they must invent a new way of behaving, or rely on very unlikely resources that were not even designed to be brought to bear upon that problem. It may mean that they must be able, intuitively, to see into the future and anticipate the consequences of behaving one way, as opposed to another. In this process they must furthermore be *creative*.

The competent response, then, calls for a certain amount of creativity on the part of the individual. Because people are able to respond competently, and the competent response requires creativity, it follows that people in general must be naturally creative (Hall, 1996). Putting this thought in perspective, not everyone is able to paint a Mona Lisa or develop a laser beam, but most people do have the capacity for novel insights, for dealing with day-to-day dilemmas and for



making original or innovative use of existing resources. Basic old-fashioned human ingenuity is the kind of creativity required for competence (Hall, 1996).

Thus, *competence* demands *creativity*. According to Hall (1996), the less creative people are, the less adaptive they are. Under ideal conditions, adaptivity is exceedingly creative. But this is only half the equation. Any kind of creative act denotes *interest* on the part of the individual. People do not tend to exert the kind of effort *creativity* requires unless they have some *personal involvement*, some personal stake in the outcome of the creative process (Hall, 1996). Interest and personal involvement, or *commitment*, are thus the precursors to *creativity*.

Whereas competence demands *creativity*, *creativity* in turn demands *commitment* (Hall, 1996). It is known that employees who are interested in the outcome of tasks will try to perform more creatively. The type of ongoing *creativity*, which might characterise a life or an organisation, requires a *sustained* capacity for dealing creatively with the internal and external environments. While any of us may be creative as a matter of spontaneous chance, when one talks about a sustained capacity for dealing competently with the events that one encounters, it takes for granted the need for a sustained level of *commitment* (Hall, 1996). *Commitment thus fuels creativity*.

Employees are not going to exert the kinds of energy, mental or physical, required to adapt to environmental demands in effective ways if they are not committed to solving the problem at hand. They are not interested in being adaptive without some underlying motivation. *Commitment* is the psychological energy that powers and facilitates achieving a creative interface of the internal and external environments.

Competence may now be defined as a sustained capacity for meeting environmental demands in both a creative and committed fashion (Hall, 1996). Competence as a sustained capacity, is not the same as episodic, short-term effectiveness. A *sustained* state carries a kind of built-in assurance that one will be up to the task irrespective of what it is. Leaders can build cultural conditions that facilitate sustaining the competent response. What must be done if the



expression of individual competence is to become so widespread that collective competence becomes the defining feature of organisations? The answer says Hall (1996) is that a culture for *organised* competence needs to be established.

### 3.9.6 ORGANISED COMPETENCE

Organised competence may be thought of as utilisation of the collective competencies of individuals and leaders which must provide for a meshing of talents (Hall, 1996). For the cave man trying by himself to figure out a way to catch and kill an antelope without chasing it all over God's creation, the necessary resources are available and free for the taking. No one has control over him selecting a rock to throw, or cutting a vine to sling the rock further, or utilising pieces of wood in whatever manner he chooses to construct a bow and arrow. No research and development group has engineered the thing. No production group has decided the most efficient way to produce it and no market research department has surveyed whether other potential consumers would prefer ash or oak. He has seen a need and set a task for himself. He is thus totally involved and committed to this task. Once he has his bow and arrow, his physical survival is enhanced because he now has access to a whole new source of food. It is safe to say that he has also been rewarded with an enhancement of his feelings of self-worth; he can proceed with greater confidence in himself and his capabilities. Discovering and constructing a better way to kill an antelope has been for the cave man a highly personal adaptive task, it is his and he owns it. This is primitive competence and is as old as humanity (Hall, 1996).

But a thousand years later one of his progeny will go to work for a widget-producing organisation. What does she know or care about widgets and their production? How personal a task can widget-production possibly be for her? How relevant is widget-production to her personal goals? Given her need to be competent in her environment, how does the organisation get her and her ego involved in widget-production? These are the cultural questions underlying organised competence that must be answered (Hall, 1996).



For the individual, competence equates with adaptive fitness and determines survivability. For an organisation, competence implies that the organisation is characterised by a response readiness to environmental demands. *Organised competence* is the sustained capacity of an organisation to respond to the demands of its environments, either social or physical, internal or external in a committed and creative fashion (Hall, 1996).

The basic ingredients needed for this adaptive readiness which is called competence are *commitment* and *creativity*. The basic ingredients are the same whether the subject of discussion is individual functioning, or of a complex social system. After all, the social system, the organisation, is nothing more than an aggregate of individual human beings who bring with them all the raw material needed for organised competence (Hall, 1996).

When leaders of organisations manage the raw material in such a way as to unleash the competence potential, they are developing and capitalising upon a symbiotic relationship between individual goals and organisational goals (Hall, 1996). Employees are in the organisation for reasons perhaps not even germane to the purposes of the organisation, but the organisation has a need to adapt competently, as do its employees. As the employees are given opportunities to behave more competently, the organisation's capacity to respond to environmental demands is enhanced. Such a symbiotic relationship is not only possible, but also necessary according to Hall (1996). The question for leaders is whether they recognise the relationship in the first place, and then, whether they can create an organisational culture that will synthesise or capitalise on such collective needs and capabilities.

### **3.9.7 THE COMPETENCE PROCESS: A CULTURE-BUILDING STRATEGY**

The *Competence Process* addresses the issue of managing to achieve organisational competence. How might leaders create conditions for *commitment* and *creativity* in their organisations? How might they reward,

rather than blunt the competence motive? How do leaders see to it that the goals of the organisation dovetail with the goals of the individuals who make up the organisation? How do leaders instil in individuals that personal sense of owning the organisational task? They build a culture based on an expectation of competence (Hall, 1996).

When one begins to consider how you might achieve organisational competence, one needs to acknowledge, first of all, that *creativity* will be a major consideration in shaping and determining the competent response (Hall, 1996). Further, you know that *commitment* will be an equally major factor demanded by the competent response. These are the issues that are addressed by the *Competence Process*. In the culture-building process, as it turns out, one must work backwards. *Creativity* demands *commitment* and both, in turn, flow from the granddaddy of all concepts in the behavioural science approach to leadership: *collaboration*. *Collaboration* is then the wellspring from which the potentials for both *commitment* and *creativity* flow (Hall, 1996).

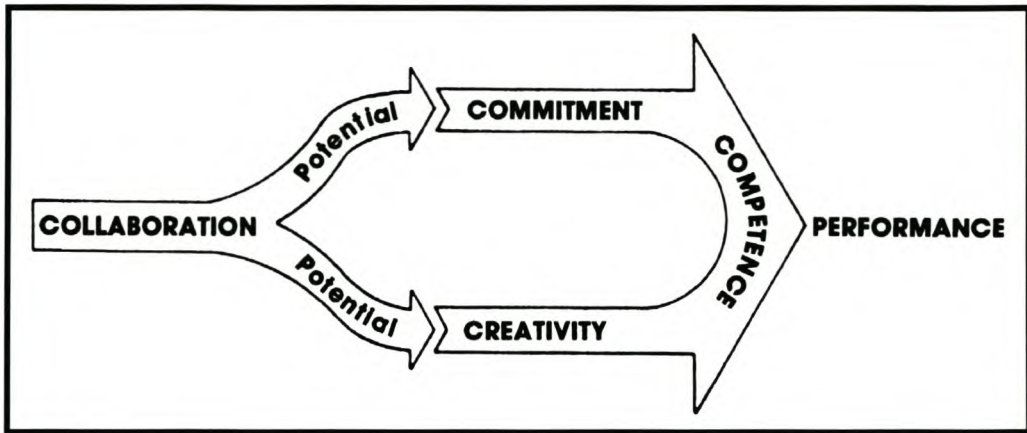
As viewed in the *Competence Process*, the collaborative approach is a triggering mechanism, setting off the potential for *commitment* and *creativity* (Hall, 1996). *Collaboration* sets in motion the potential for heightened *commitment* on the part of the people who do collaborate and, in turn, paves the way for *creativity* on the part of those who are committed. The *Competence Process*, then, is comprised of three cultural dimensions: *collaboration*, *commitment* and *creativity*.

### 3.9.8 THE STRUCTURE OF COMPETENCE

Figure 3.1 portrays a skeletal structure of competence wherein *collaboration* is seen as the prime mover in a sequence which culminates in a response state of competence that leads to performance (Hall, 1996). Both *commitment* and *creativity* flow out of collaborative opportunities and combine to yield the competent response. As can be seen from Figure 3.1, this competence or competent response is linked with performance. The arrows in Figure 3.1, and



those to follow, should be interpreted in the above manner, that they indicate a relationship between the concepts and not necessarily causality.



**FIGURE 3.1: A Skeletal Structure of the Competence Process**

Source: Hall (1996)

How do you manage collaborative dynamics so that they prove to be meaningful? What kind of attention does the *commitment* dimension of competence require? How do we plan for *creativity*? The answers to these questions lie in the conditions that organisational leaders create in the organisation (Hall, 1996).

Conditions evolve within organisations, whether they have been consciously created or not, which either facilitates or inhibits competent performance. These are the organisational conditions directly under the control of leaders and are amenable to their influences (Hall, 1996). Some may either facilitate a collaborative process or operate as anti-collaborative influences. Others influence the degree to which *commitment* becomes a sustained characteristic of the employees who comprise the organisation. Still others either capitalise upon the achievement of creative enterprise or run counter to it. From these conditions, from the extent to which they characterise the culture of the organisation, is derived the strength of the *collaboration*, *commitment*, and *creativity* dimensions of competence (Hall, 1996).

### 3.9.9 THE CONDITIONS FOR COLLABORATION

*Collaboration* is a problem-solving activity. People emerge from doing collaborative tasks (decision making; job analysis; planning; forecasting and allocating resources) with a clearer picture of what is to be done, how to do it and with a better understanding of their own responsibilities. *Collaboration* is also the sharing of power. When leaders create opportunities for those affected by decisions, to share in making them, they are partially divesting themselves of their formally endowed leadership power and reinvesting it in others (Hall, 1996). For those others, sharing in decision making is esteem building. It empowers and gets employees involved in the tasks to be done.

The task of leaders, then, is to see to it that supporting conditions for genuine *collaboration* exist in, and characterise, the organisation. These supports, added to the skeletal structure in Figure 3.2, provide the strength for collaborative effects and, as such, are critical to the achievement of competence (Hall, 1996).

For there to be a truly collaborative system that will unleash a potential for *commitment* and *creativity*, there must be a system of *management* or *leadership values* which sustains, supports and puts into effect collaborative dynamics (Hall, 1996). Management values reflect the philosophic stance of the organisation. They show up in authority relationships in a variety of subliminal ways. Employees in the organisation sense the values rather than actually experiencing them in any tactile, first-hand way. They know what the values are even though they are hard to pin down.

The competent organisation is characterised by an egalitarian value system where employees are valued as individuals, not because of the work they do, and leaders trust the competence of their personnel (Hall, 1996). There is not a caste system of haves and have-nots, of those with power and those without and of those who receive and those who do not. Under a more authoritarian value system, those who do not receive will not collaborate, even if given the opportunity (Hall, 1996).



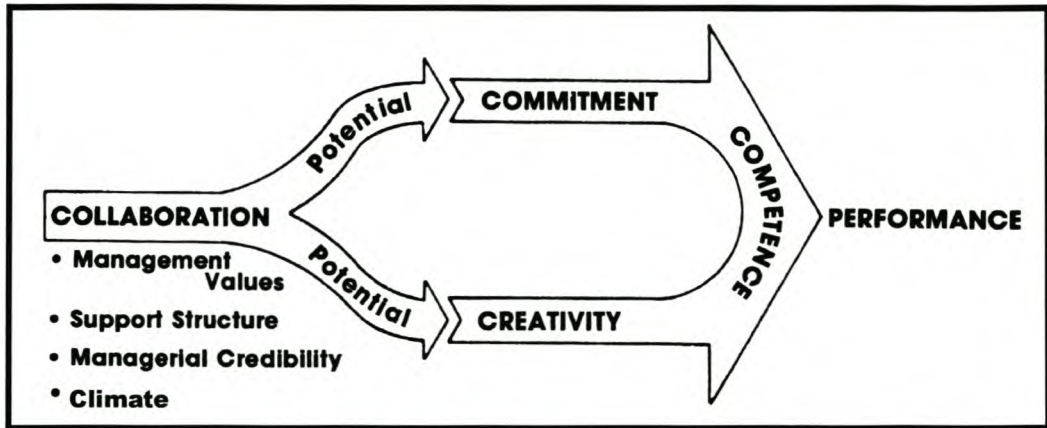


Figure 3.2: Conditions for Collaboration

Source: Hall (1996)

In addition Hall (1996) proposes that there must be *support structures*, also called *access leadership*, for involvement that makes the collaborative value system feasible. The organisation must be put together geographically, technically and otherwise, in such a way that the leadership will encourage individuals to collaborate, if they can indeed do it. The organisation must be structured so that employees have access to others with whom they work, and access to the information that they require (Hall, 1996). If employees are spread to the hinterlands, no matter how badly leaders want their input, it will not be forthcoming. The support structure characterising the competent organisation is also one wherein emotional support, at the purely social interactive level, facilitates, encourages and enhances involvement, which are the operational expressions of collaborative actions (Hall, 1996). They also guarantee access to problem-solving supports. If leaders are supportive when employees express their views, and solicit those views, they are being supportive of the collaborative ethic.

There must, furthermore, be *managerial or leader credibility*, which Hall (1996) identifies as nothing more than basic *trust*. If leaders do not enjoy credibility among their employees, the effect that they have on them is automatically diminished. If a leader makes promises, provides collaborative opportunities and then does nothing at all with the inputs, the leader has no credibility.

Candour must characterise the leader's communication style and employees must be able to verify the leader's intent (Hall, 1996). They must know that leaders mean what they say. In the competent organisation, when a leader asks for an opinion or suggestion, something will be done with it and employees will receive feedback about the outcome. Combined, such considerations give individual leaders credibility in the eyes of the employees who are being encouraged to participate.

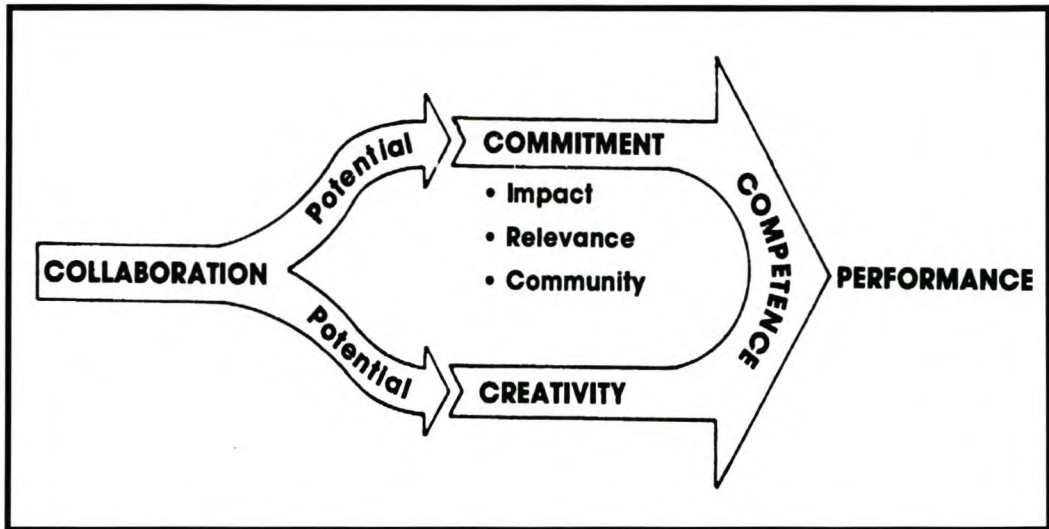
Finally, there must be a supportive *climate* to ensure a truly collaborative system (Hall, 1996). Climate is closely interrelated and dependent upon *the leadership/managerial values* and *leader/managerial credibility* inherent to the organisation. Climate may be categorised as the general tone of the organisation, including employees' feelings about the system of values and practices that characterise the workplace, and their role in it (Hall, 1996). It further represents a set of work-related feelings that sets the emotional tone of the organisation.

### 3.9.10 THE CONDITIONS FOR COMMITMENT

The potential for heightened *commitment* is a by-product of *collaboration*. But, until this potential is recognised and managed, it is *only* potential (Hall, 1996). Like potential energy, something is needed to activate it so that it might be brought to bear in the doing of work. Leaders must thus ensure conditions exist that is supportive of *commitment*.

Employees must be empowered and made to feel that their ideas and opinions count for something. Having derived a heightened sense of purpose, employees must also be able to spend their energies on issues and tasks germane to this purpose, and when a sense of partnership is achieved, employees must be able to engage in co-operative effort (Hall, 1996). Figure 3.3 depicts the attendant conditions for *commitment*.





**FIGURE 3.3: Conditions for Commitment**

Source: Hall (1996)

Unless employees have *impact* or *authority relationships* within the range described by the jobs that they do, all the *collaboration* in the world is for naught (Hall, 1996). Employees must be able to see that they can make something happen. In the competent organisation, employees have power and direct influence and they control their own procedures and guidelines. They influence design decisions where their work is concerned and determine the best way to do their work (Hall, 1996).

Employees can collaborate until they are blue in the face, but if they have no power, no impact on what is going to occur, they very quickly realise that the collaborative opportunity has been a sham and their *commitment* disappears (Hall, 1996). Impact, therefore, is an extremely critical condition for achieving and maintaining a sustained high level of *commitment*.

Related to impact, are the conditions of *promoting work incentives* or *relevance* (Hall, 1996). Employees expect their talents to be used. They expect to spend their time on tasks that are important and relevant to the organisation's objective. They also need to be given the opportunity to spend their time on the core

activities of the organisation. Employees can be asked, encouraged and helped to collaborate and become involved, they might even be able to see the impact of their ideas, but if their *collaboration* is not relevant to the jobs they are supposed to do, leaders will not derive any of the *commitment* potentials that they hoped for (Hall, 1996).

The leader who only asks employees to help plan the company picnic, to help decide where to put the cold drink machine, or when they are taking their vacations, is not managing for *commitment*, but wasting the potential set in motion by the use of collaborative dynamics. *Commitment* has to do with power, the nature of the work itself, and with factors relevant to the work situation (Hall, 1996).

*Community* or *Teamness* is the mechanism whereby *commitment* becomes a widespread commodity. To operate as a viable force, *commitment* within the organisation must be widespread (Hall, 1996). One person's *commitment* is not sufficient to energise a total organisation. For example, the person in the design department who has collaborated, made decisions about things relevant to his or her work, may have a tremendous sense of *commitment*. But unless the employees in manufacturing share that *commitment*, indeed the entire organisational community, very little creative work will be put into implementation.

Leaders must create a set of conditions that promote a sense of community, so that employees are encouraged to rely upon and help one another in their work. Programmes, which promote individual competition, compete with a sense of community by encouraging employees to be self-centred rather than concerned with the welfare of all (Hall, 1996). Competitive dynamics isolate employees, divide, and undermine the strength of *commitment* as an organisational force.

This principle of *teamness/community* is very similar to the African principle of "*Ubuntu*". Mbigi (1992) describes the working of *ubuntu* by explaining several fundamental principles thereof. The following principles are relevant to *teamness*:



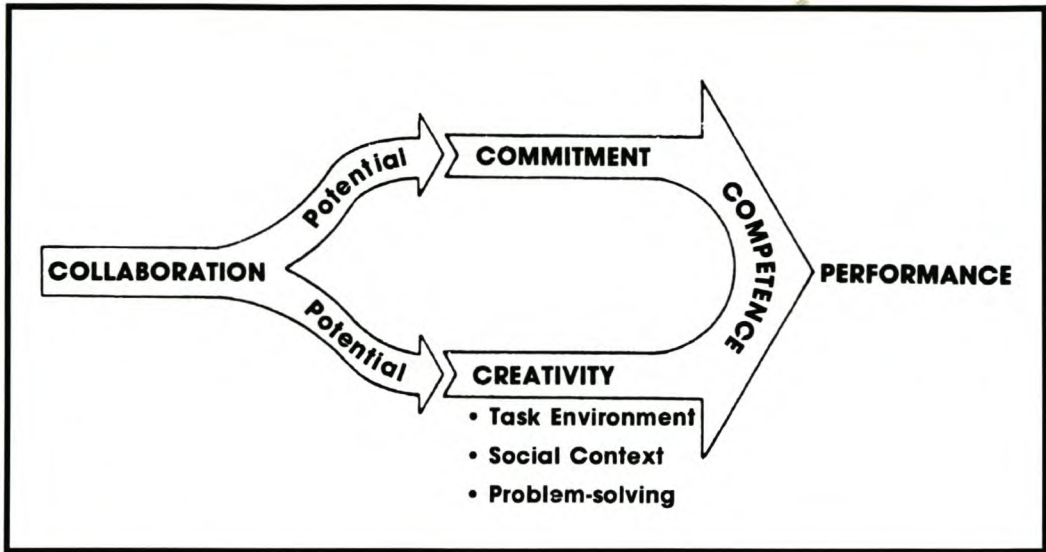
- **The principle of interdependence** believes that co-operation and the facilitation of attaining communal goals should replace independence.
- **The principle of totality** entails working together towards a communal goal.

When the conditions for authority relationships, promoting work incentives and *teamness* are successfully managed for *Commitment*, leaders can expect employees to be energised and poised for creative enterprise.

### 3.9.11 THE CONDITIONS FOR CREATIVITY

Organisational competence requires creative problem solving (Hall, 1996). It is in the *creativity* dimension that the seeds sown in *collaboration* and nurtured in *commitment* reach fruition. Leaders are responsible for the internal environments of organisations and these environments directly influence the creative process. As depicted in Figure 3.4, the conditions in support of the *Creativity* dimension are *work processes*, *social processes* and *problem-solving processes*.

Employees may not be able to act on their creative urges unless they have *work processes* or a *task environment* which facilitates access to the resources that they need (Hall, 1996). It is almost more trouble than it is worth for a lathe operator to walk to another building and fill out several forms before he can get the tools he needs to be creative in his job. By the same token, *creativity* requires freedom, even freedom to fail (Hall, 1996). When every possible feature of the work is standardised, when rigid controls govern resource allocation, when departure from approved procedures is punished, and failure is not tolerated, *creativity* is squelched. But if leaders encourage experimentation and reward innovation in a free-flow *task environment* where the major emphasis is on getting the job done in the best possible way, they will often encounter a windfall of creative input and quality output (Hall, 1996).



**FIGURE 3.4: Conditions for Creativity**

Source: Hall (1996)

The social dynamics of the workplace are every bit as important to *creativity* as the task environment. The *social context* or *social processes* must allow for the stimulation of social dynamics, for a creative ambience in the workplace (Hall, 1996). By taking into account the spontaneous, exuberant, risk-taking aspects of *creativity*, leaders can promote values and norms and exemplify practices that make the workplace a fun, interesting place to go to rather than a place which provides the interpersonal equivalent of sensory deprivation.

The social context defines the way employees can relate to one another in doing their work. People must be able to share their work experiences, to exchange ideas, and to talk candidly with one another in the course of their work. When employees find camaraderie and stimulation in the workplace; they see others as interested and dependable; they can share their own competence and draw upon that of others, even question and advise their leaders, then the social conditions for *creativity* are being managed competently (Hall, 1996).

Finally, all the supporting conditions for *collaboration*, which leads to the potential for *commitment*, and all the supporting conditions for *commitment* that actualise that potential, creates a free-flow task environment and a collaborative



social context for *creativity* have been discussed. But, if one does not have proper *problem-solving processes*, the process will be ruined at the end (Hall, 1996).

The way employees approach problem-solving tasks is a core issue in competence. There are identifiable processes and techniques, some of which are more creative than others, for approaching problem solving. The process can either close off *creativity* to a trickle, or encourage a flow of original and emergent solutions (Hall, 1996).

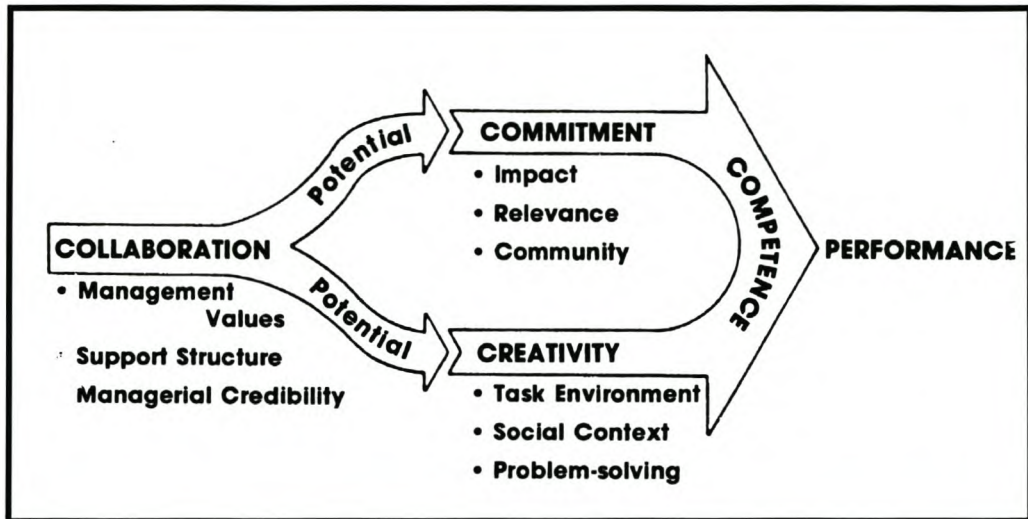
The leaders provide the example of approved problem-solving processes and if differences of opinion are squelched, if innovative ideas are ignored, if "experts" have the final word and if problem solutions must be in line with the policy manual, then scant will be the creative outcome (Hall, 1996). *Creativity* is also diminished when leaders favour compromise and avoid conflict. But, if constraints on imagination are removed, if conflict is recognised as a necessary precondition for *creativity*, if common problems are managed for common acceptance, the probability of creative outcomes is greatly enhanced (Hall, 1996).

The fleshed-out structure of the *Competence Process*, complete with supporting conditions, is presented in Figure 3.5. Again, the basic premise is that *creativity* and *commitment* define the competent response. One must also recognise that *collaboration* is the well-spring out of which the potential for *commitment* and *creativity* must flow.

Obviously, the premise implies that organisational cultures that are characterised by more of these conditions encourage more competence and, furthermore, equips the organisations with more of a sustained capacity to respond in a creative and committed fashion to the demands of its environment (Hall, 1996).

When fewer of these conditions characterise an organisation's culture, not only are its employees deprived of their opportunity for a sense of efficacy, but the overall adaptability and competence of the organisation is being tampered with

as well. In more practical terms, the dimensions of competence explain why some organisations are productive and others are not (Hall, 1996).



**Figure 3.5: The Competence Process**

Source: Hall (1996)

### 3.9.12 COMPETENCE AND PERFORMANCE

The description of the *competence process* above and illustrated in Figure 3.5, clearly describes the relationship between the conditions for competence and organisational performance.

The equation proposed by Hall (1996) is revisited:

$$\text{Performance} = \text{Potential} - \text{Interference}$$

The current performance of an organisation thus reflects the amount of available potential which actually *finds expression* in job accomplishment (Hall, 1996). Therefore, high performance requires maximum potential coupled with minimal interference. Interference usually stems from the conditions of work, or organisational culture provided by management. On an individual level, the



relationship between individual competence and organisational productivity is expressed as follows:

$$\text{Productivity} = f(\text{Human Competence} \times \text{Conditions of Competence})$$

Based on the competence theory proposed by Hall it can be hypothesised that the dimensions of organisational culture or competence – *collaboration*, *commitment*, *creativity* and the supporting conditions thereof - are directly proportional to the potential for performance. This means that high-performing organisations are characterised by significantly stronger conditions for competence (Hall, 1996). The inverse is also true, low-performing organisations are thus characterised by significantly weaker conditions for competence. Going back to the first equation, the stronger the conditions for competence, the greater the expression of potential and the weaker the interference, which ultimately will lead to higher performance (Hall, 1996).

The *Organisational Competence Index* (OCI) that was developed from this theory is able to measure the strength of *collaboration*, *commitment* and *creativity* in organisations, and their supporting conditions.

### 3.10 SUMMARY

It was found that measures of organisational effectiveness or performance are complex and ambiguous due to the fact that many of the performance criteria demands are contradictory with regard to one another. Organisations inevitably have an array of stakeholders and any particular measure of performance often tends to pit one stakeholder against the other.

Various authors have proposed several conceptual frameworks for organisational effectiveness, several of the basic models were discussed. Based on the conceptualisations of organisational effectiveness, a number of measures and

ratios have been developed to quantify the concept, a number of these measures being listed. This was followed by a discussion of a number of guidelines for assessing organisational effectiveness.

The following three objective performance criteria were chosen for this study: 1) financial profits, 2) stock losses, and 3) labour turnover. These were chosen because it was felt that commercial organisations ultimately have one important "bottom line", namely to create wealth for all associated with the organisation, and therefore to be financially successful.

The second section of this chapter dealt with the theoretical perspective on the relationship between organisational culture and organisational performance, which was based on the competence theory. The competence theory formed the theoretical basis on which this correlative study was executed and an overview of this theory concluded the chapter.



## **CHAPTER 4**

### **PROBLEM FORMULATION, OBJECTIVES, HYPOTHESES AND THE RESEARCH METHODOLOGY**

#### **4.1 INTRODUCTION**

The technical aspects of the study are discussed in order to develop the reader's confidence in the quality of the procedures that were used. Van der Schyf (1989) maintains that a discussion of the research methodology used in an empirical study is necessary, as an absence of any indication of the logic that was followed in the implementation of a scientific method may result in the evaluation of its research findings and their interpretation to be highly problematic.

This chapter provides an overview of the problem formulation, objectives and hypotheses that were set for this study. It further discusses research methodology, types of research, data collection and research design in general. The chapter concludes with a description of the research methodology, measuring instrument, sample, sampling method and the statistical analysis used for the purposes of this study.

#### **4.2 THE RESEARCH PROBLEM**

While a number of attempts have been made to measure organisational culture, this line of inquiry has led to an investigation of the relationship of organisational culture to other organisation-level variables (Petty *et al.*, 1995).

Organisational effectiveness is arguably the most important variable at this level that has been examined by a number of authors.

Qualitative analysis led Barney (1986) to state that the company that has a valuable, rare and imperfectly imitable culture, enjoys a sustained competitive advantage. Camerer and Vepsäläinen (1988) predicted that firms would be effective if their cultures solved the management problem of governing economic activity efficiently. With Weiner's (1988) "shared values" framework, the functional-traditional cultural style was considered the most likely to contribute to the development of "proper" values and consequently to organisational effectiveness.

Denison (1984), using concrete performance indicators and a quantitative measurement methodology, reported that companies with a participative culture reaped a return on investment which averaged nearly twice that of firms with less efficient cultures. He concluded that cultural and behavioural aspects of organisations were intimately linked to both short-term performance and long-term survival.

Kotter and Heskett (1992) reported the results of three studies that examined the organisational culture-performance relationship. To do this they measured culture strength with a survey asking top managers to rate the cultures of other companies in their industries. Kotter and Heskett then created culture strength indexes for 202 companies, after which they calculated the average yearly increase in net income, average yearly return on investment, and average yearly increase in stock price for each of the companies. They found a positive correlation between culture strength and the performance measures, but the relationships were not strong. Their conclusion: Culture strength may be important, but it is only part of a puzzle.

However, the existence of a positive link between organisational culture and performance has not gained unanimous acceptance (Petty *et al.*, 1995). According to Saffold (1988), the link between culture and performance is not a straightforward one. Reynolds (1986) concluded that there was little evidence of



an association between organisational performance and one particular element of organisational culture. Also, Argoswamy and Byles (1987) concluded that organisational culture was not crucial to organisational performance, but was just one of many explanatory variables.

The purpose of this present study was to explore quantitatively the relationship that exists between organisational culture and organisational performance within a South African organisation. The research problem, furthermore, not only focused on establishing a relationship between aspects of organisational culture and performance, but also on whether variations in the perception of organisational culture were related to organisational performance, i.e. whether the degree to which the organisational culture is widespread or shared among members of the organisation, was related to organisational performance.

#### **4.3 THE OBJECTIVES OF THE STUDY**

The description of the research problem in the preceding section created a particular frame of reference that led to the principal objectives, which follow, being set for this project. The primary objective of this study was to empirically investigate the relationship between organisational culture (independent variable, as measured by the Organisational Competence Index (OCI) and organisational performance (dependent variable, as defined) within a South African company. As mentioned in chapter one, the objective statement is:

**“To design and conduct a scientific investigation in a South African organisation, in order to determine whether a relationship exists between organisational culture and organisational performance.”**

To achieve the primary objective of this study, two objectives were proposed. They are:

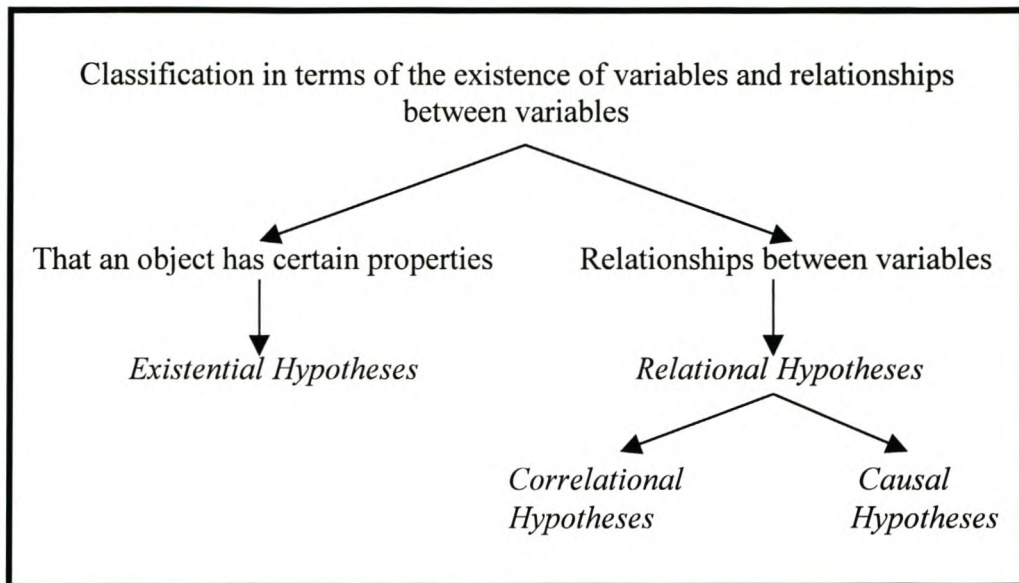
- i) To determine the statistical relationship between organisational culture and its dimensions (as defined for the purposes of this study) and organisational performance (expressed in terms of financial profits, stock losses and labour turnover) with the use of inferential statistics.
- ii) To determine whether the variation in the perception of organisational culture held by organisational members within a business unit is related to the performance indicators of that unit.

#### 4.4 THE RESEARCH HYPOTHESES

Hypotheses can be classified into two main groups, namely *existential* and *relational* hypotheses (Mouton, 1996). An *existential* hypotheses is a provisional statement about a certain state of affairs, that is, it makes a claim that something is the case. Such statements are claims that a certain entity (a group of individuals, a city, etc.,) have a certain property (being illiterate, adopting attitudes towards abortion, crime rate, etc.,) and what the value of that property is. *Relational* hypotheses postulate that a certain kind of relationship exists between two or more variables (Mouton, 1996). Two further sub-divisions of relational hypotheses can be distinguished, they are *correlation* (or descriptive) hypotheses and *causal* (or explanatory) hypotheses, depending on the type of relationship that is being postulated (Mouton, 1996). The kinds of hypotheses are illustrated in Figure 4.1.

To execute the required research, six hypotheses were set. These hypotheses have been formulated as *relational* hypotheses, which postulate that a certain kind of relationship exists between variables and are further examples of the *correlational* (or *descriptive*) sub-type (Mouton, 1996). These hypotheses are further presented in the alternative form below and thus not in the 'null-hypothesis' form. However, in Addendum B-H, which is the section that deals with testing the hypotheses, they are presented in the null-hypothesis format.





**FIGURE 4.1: Kinds of Hypotheses**

Source: Mouton (1996)

## **HYPOTHESIS ONE**

Hypothesis one states that a negative relationship exists in the business units or areas between stock losses and the thirteen organisational culture dimensions that were measured by the OCI.

## **HYPOTHESIS TWO**

Hypothesis two states that a positive relationship exists in the business units or areas between financial profits and the thirteen organisational culture dimensions that were measured by the OCI.

## **HYPOTHESIS THREE**

Hypothesis three states that a negative relationship exists in the business units or areas between labour turnover and the thirteen organisational culture dimensions that were measured by the OCI.

#### **HYPOTHESIS FOUR**

Hypothesis four states that a positive relationship exists in the business units or areas between stock losses and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI.

#### **HYPOTHESIS FIVE**

Hypothesis five states that a negative relationship exists in the business units or areas between financial profits and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI.

#### **HYPOTHESIS SIX**

Hypothesis six states that a positive relationship exists in the business units or areas between labour turnover and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI.

### **4.5 THE RESEARCH PROCESS**

Research can be described as systematic enquiry, which indicates that it is a process that is structured to examine a problem in such a way that (Kerlinger, 1986; Meriam & Simpson, 1984):

- the examination process can be replicated;
- the data is generated in a standardised form;



- the data can be statistically manipulated to indicate meaningful relationships;
- defensible conclusions can be drawn from relationships, or the lack of thereof;
- new or improved understanding of results can be achieved from these conclusions; and
- further avenues of research are laid bare.

Leedy (1993) describes research as a procedure by which the researcher attempts to find systematically, and with the support of demonstrable fact, the answer to a question or the resolution of a problem. Leedy (1993) further states that research should be viewed as being circular in the sense that the researcher seeks facts (data) which seem pertinent to the solution of the researchable problem from within the research universe (environment) that gave rise to the researchable problem and which is potentially fact-laden. The collected data is then organised, analysed and interpreted in order to facilitate the solution of the researchable problem that originally gave rise to the research effort. At this step the research cycle is complete. Leedy (1993) is of the opinion that it is more realistic to view this cyclical concept as a helical (spiral) concept, as research frequently gives rise to further unexplored problems which then require a repeat of the research cycle for their solution.

Research methodology can be viewed as being the logic of implementing scientific methods in the study of reality within the research cycle, in the manner described above. Research design therefore has two basic purposes: 1) to provide answers to research questions and 2) to control variance. Design helps researchers to obtain the answers to questions of research and further helps them to control the experimental, extraneous and error variances of the particular research problem under study (Mouton, 1996).

Research design sets up a framework for study of the relations among variables. Design tells the researcher what observations to make, how to make them and

how to analyse the quantitative representations of the observations. A design further tells the researcher what type of statistical analysis to use. Finally, an adequate design outlines the possible conclusions to be drawn from the statistical analysis (Mouton, 1996).

The following are three principal research methodologies that may be used depending on the type of research objective:

- i) **Exploratory Research.** The goal of exploratory research is to explore relatively unfamiliar fields. The objectives of explorations are (Mouton & Marais, 1988):
  - to gather information about the domain phenomenon;
  - to act as a pre-survey to a more structured study of the phenomenon;
  - to explicate central concepts and constructs;
  - to decide on priorities for further research; and
  - to develop new hypotheses about existing phenomena.
  - This type of research is characterised by a high degree of flexibility (Tull & Hawkins, 1980). There exist few, if any, formal hypotheses and “soft” methods are often used, e.g. interviews (Lehmann, 1979).
- ii) **Causal / Explanatory Research.** Causal research attempts to specify the nature of the functional relationship between two or more variables in a problem model. The assumption is that certain variables affect the value of other variables (Tull & Hawkins, 1980).
- iii) **Descriptive Research.** The descriptive survey method, sometimes called the normative survey method, is appropriate for data that is derived from observational situations and which may lie buried deep within the minds



or attitudes or reactions of men and women (Behr, 1988). In descriptive research the emphasis is on the description of a specific individual, situation, group, organisation, subculture, etc. The emphasis can also be on the description of the frequency with which a specific characteristic or variable is present in a sample (Mouton & Marais, 1988).

Descriptive research focuses on the accurate description of variables in the problem model (Tull & Hawkins, 1980) and it is accepted that the relevant variables are known. The hypotheses are of a general nature:  $x$  correlates with  $y$  (Lehmann, 1979). The results are often profiles of one group versus another group. The instrument for observing data beyond the physical reach of the observer is the questionnaire (Leedy, 1993).

From the above descriptions of three different kinds of research, it should be apparent that this particular study can be described as descriptive research.

#### **4.5.1 SURVEY RESEARCH**

Survey research (like this project) studies large and small populations by selecting and studying samples chosen from the populations to discover the relative incidence, distribution and interrelations of sociological and psychological variables (Schnetler, Stoker, Dixon, Herbst, & Geldenhuys, 1989). Surveys covered by this definition are often so-called sample surveys. Survey researchers are interested in the accurate assessment of the characteristics of whole populations. Only rarely, however, do survey researchers study whole populations: they usually study samples drawn from populations.

The most important contributions of survey research has been the rigorous sampling procedures, the overall design and the implementation of the design of studies, the unambiguous definition and specification of the research problem, and the analysis and interpretation of the data (Schnetler *et al.*, 1989). Employee surveys have been popular for some time, and Kraut (1996) reports that more

than half of U.S. companies currently use employee surveys in some form, with surveys also widely used in the public sector. Employee surveys can address a wide range of topics, but typically include at least some content related to work culture (Rollins & Roberts, 1998).

Surveys can be conveniently classified by the following methods of obtaining information:

- **Personal interviews.** While this method has the advantages of being able to obtain good co-operation from respondents and being able to probe for answers, the disadvantages, being high cost and time constraints, prevent the use of this instrument.
- **The telephone interview.** Although the costs involved in this method are lower than those related to the personal interview, it was decided not to use this method because of the envisaged difficulties in obtaining sufficient quality time from respondents for conducting the interview.
- **The postal survey or mail questionnaire.** In this method the respondent is required to fill in the questionnaire himself and the questionnaire is the only means of communication between the researcher and respondent.

These methods of gathering information are examples of structured data collection instruments that can be used by most researchers due to their simplicity. Unstructured data collection methods, on the other hand, are specialised techniques that require considerable experience to administer (Schnetler *et al.*, 1989). The principal method of gathering information in survey research is by using a schedule or questionnaire.

For the purposes of this study, the OCI questionnaires were posted to the various participants throughout the country via the PEP Stores internal mail system. Thus, a postal survey method was used to collect the data required for this research. Baily, (1987), Emory and Cooper (1991), Huysamen (1994) and



Schnetler *et al.* (1989) indicated that the postal survey method has the following advantages (to be discussed first) and disadvantages:

- **Considerable savings in money.** It usually is the lowest-cost method of data gathering, especially if potential respondents are geographically dispersed (as was the case in this study).
- **Time savings.** Mailed questionnaires can be sent to all respondents simultaneously, and most of the replies will be received within a few weeks, while interviews, for example, may take months to complete. Information can thus be obtained speedily from many respondents.
- **Anonymity.** Since there is no interviewer present to identify the respondent, the chances are better that such questionnaires are completed honestly and the respondent may be more willing to provide socially undesirable answers, or answers that violate norms.
- **The questionnaire may be completed at the respondent's convenience.** The respondent is able to spend more time on the questionnaire than he/she might in an interview study.
- **Standardised wording.** The stimulus provided to the respondent is identical in all cases, since the questionnaire is the only means of communication between the researcher and the respondent, which assists in the comparison of different respondents' answers.
- **Coding of questionnaires.** Postal questionnaires are usually highly structured and little use is made of open-ended questions. These two facts make the postal questionnaire easy to prepare for data capture on a computer.

Having considered the advantages of the postal survey method, it is necessary to consider the disadvantages. Baily, (1987), Emory and Cooper (1991), Huysamen (1994) and Schnetler *et al.* (1989) state that this method has the following disadvantages:

- **Low response rate.** The major disadvantage of this method involves the common occurrence of a low response rate. The problem lies in the fact that the respondents who do not answer are generally not a random selection of the sample, but have some biasing characteristics. Respondents who do not return the questionnaire may have definite opinions on the subject under investigation. Thus, bias may be introduced into the data as a result of the poor response rate.
- **Lack of flexibility.** It is not possible for respondents to qualify their answers or to discuss or justify their answers with the researcher. There can also be no variation in the questions asked by the interviewer as he/she is not present.
- **Inability to clarify questions.** All questions within the questionnaire are interpreted from the frame of reference of the respondent and it is impossible for the researcher to clarify the respondent's personal interpretations of the questions.
- **Incomplete questionnaires.** Respondents may omit questions that they do not fully understand or do not care to answer. This leads to a situation where the statistical analysis has to make provision for missing values or sections of the questionnaire that were not completed by the respondent.

The decision to make use of the postal survey method to provide answers to the research problem as defined for this study was motivated by the advantages of using this method proposed by Baily, (1987), Emory and Cooper (1991), Huysamen (1994) and Schnetler *et al.* (1989), as discussed above. It was felt that these advantages outweighed the potential disadvantages.



## **4.6 SOURCES OF INFORMATION: GETTING THE REQUIRED DATA**

In order to address the research problem adequately, information needs to be analysed. Therefore it must be determined whether the data can be derived from published sources, or whether research is required. In some instances both can be used, but the sources were finally categorised as follows for the planning of the research.

### **4.6.1 SECONDARY DATA**

Secondary data is data that is already published and that serves as a background for the planned research. The secondary data in this study comprised the following:

- Bibliographic data describing the definition, characteristics, models, formation, transmittance, maintenance and changing of organisational culture.
- Bibliographic data describing the models of effectiveness, performance measures and guidelines of the choice of organisational performance criteria.
- Bibliographic data describing the relationship between organisational culture and organisational performance

### **4.6.2 PRIMARY DATA**

Primary research is usually undertaken when the information available from secondary sources is inadequate or inappropriate for solving the problem at hand. Thus primary research is the process of obtaining information directly from the source of information and it is gathered to attain the specific research

goal(s). Qualitative research, surveys and experiments are all primary sources of data.

The following data was generated:

- Data indicating the systematic measurements of the thirteen dimensions of organisational culture, as measured by the OCI.
- Data indicating the measurement of the criteria that was defined to represent organisational performance.

#### **4.7 THE RESEARCH DESIGN**

The design of the research project is probably the most important process through which the researcher must proceed and refers to the basic plan or strategy of the research and the logic behind it, which will make it possible and valid to draw more general conclusions from it (Oppenheim, 1992). The research design will indicate to the researcher how the sample will be drawn, what sub-groups it will contain, what comparisons will be made, whether or not the study will need control groups, what variables will be measured and how these measures will be related to external events. Research design is concerned with making the research problem researchable by setting up the study in such a way that it will produce specific answers to specific questions (Oppenheim, 1992).

Oppenheim (1992) proposes thirteen stages through which a social researcher must proceed to be able to draw up a research design. These steps were adapted into a flow diagram that was used to structure and develop the research design of this study. The flow diagram is presented in Figure 4.1.



### **SURVEY RESEARCH FLOW PLAN**

- Step 1: The aim of the study.** What the general and specific aims of the study (conceptual and operational goals of the study) are.
- Step 2: Literature review.** Review of the relevant literature.
- Step 3: Preliminary conceptualisation of the study.** Exploratory work.
- Step 4: Design of the study.** Assessing the feasibility of the study within the limitations of cost, time, etc. The study is abandoned at this point if necessary.
- Step 5: Hypotheses to be investigated.** Operationalise the hypotheses.
- Step 6: Research instruments.** Design, adapt the necessary research instruments and techniques.
- Step 7: Pilot work.** Try out instruments and revise if necessary.
- Step 8: Designating samples.** Choose the type of sample required.
- Step 9: Selection of the people.** Select people to be approached.
- Step 10: Field work.** Actual data collection process.
- Step 11: Processing the data.** Code responses and prepare data for analysis.
- Step 12: Statistical analysis.** Test for statistical significance.
- Step 13: Testing the hypotheses.** Assemble results and test hypotheses.
- Step 14: Research report.** Describe the results in words and tabulation, relating the findings to previous research, drawing conclusions and interpretations.

**FIGURE 4.2: Flow Plan for Research Design**

Source: adapted from Oppenheim (1992)

#### 4.7.1 THE MEASURING INSTRUMENT

There are a number of instruments that attempt to measure the dimensions of organisational culture. After a review of those that are available, it was decided to make use of the Organisational Competence Index (OCI), which is the instrument that is used in the Organisational Culture Analysis (OCA) of Teleometrics International. Up to 1998 this instrument had been administered to more than 400 000 people in 43 countries world-wide. The South African norm presently consists of 7893 people.

Teleometrics International, located in The Woodlands, Texas, publishes the OCI and this instrument was used for this study because it is one of the few which have been validated through a systematic programme of research carried out within actual operating organisations internationally. Teleometrics International is also one of the most respected developers of psychometric instruments internationally and enjoys scientific and applied credibility among its many clients – many of whom are in the academic community (Hawker, 1999).

Teleometrics's learning instruments have, furthermore, been used in numerous research projects at many major universities in the past. Reliability and validity studies on Teleometrics' materials have also been conducted within the stringent guidelines established by the American Psychological Association (Hawker, 1999). Cronbach's Alpha test of reliability was employed in developing the OCI. Responses of 159 people yielded an Alpha of 0.928 and this result was cross-validated with a second group of 120 people, yielding an alpha of 0.924 (Hall, 1996).

The Organisational Culture Analysis (OCA) and Organisational Competence Index are rooted in the theory of Organisational Competence described in the book: *The Competence connection – A blue print for excellence* written by Jay Hall (1996), which presents a theory that has been developed over the last 50+ years.



The 40-item OCI, is designed to assess conditions for competence within an organisation, both in terms of “the way it is” (actual conditions) and “the way it might be” (desired conditions). It results in scores for three dimensions and ten supporting conditions of competence as described in the *competence process*.

These components are largely based on a crystallisation of the dimensions proposed in the above definitions and conceptualisations of the constructs proposed in Hall’s (1996) Competence theory. The items of the OCI, which is based on this theory, therefore provide measurements of these components and dimensions. To recap, these three dimensions of competence are:

- i) Collaboration
- ii) Commitment
- iii) Creativity

The ten supporting conditions that make up the three dimensions are:

- i) Leadership / Management values,
- ii) Access leadership / Support structures,
- iii) Leader- / Managerial credibility,
- iv) Climate,
- v) Authority relationships / Impact,
- vi) Work incentives / Relevance,
- vii) Teamness / Community (Ubuntu),
- viii) Work processes / Task environment,
- ix) Social processes / Social context, and
- x) Problem Solving processes.

One of the important features of this instrument is the representative normative base that exists for it, and therefore the scores from the OCI can be evaluated according to a national, and international, sample of organisations. The OCI, in order to establish this basis of comparison, has been administered to over 3000 employees at various levels in a wide cross-section of South African organisations. These normative samples were chosen to be as representative as

possible and therefore included organisations of various sizes engaged in a variety of activities (e.g. manufacturing, research and development, service, etc.) Thus, the sample constitutes a comprehensive normative base that allows a comparison of scores with the scores of other organisations. The normative sample further has enough cases to cancel or control chance variations and response biases. Two further important characteristics of the OCI led to the decision to make use of this instrument:

- i) **Reliability.** Reliability is the requirement that the application of a valid measuring instrument to different groups under different sets of circumstances should lead to the same observations (Mouton, 1996). It thus refers to an instrument's consistency throughout a series of measurements over time. There are two general types of reliability: estimates of an instrument's stability over time and estimates of equivalence, or how well an instrument's scores agree with other equivalent measures. Stability is estimated by administering the same instruments on two separate occasions, the so-called test-retest procedure. Equivalence may be estimated either by administering alternate forms of an instrument in close succession, or by correlating one half of the instrument score with scores from the remaining half (Huysamen, 1994).

Teleometrics favours the test-retest estimate of stability, and has proven the OCIs reliability beyond doubt. Reliability studies have been conducted in South Africa and confirmed this fact.

- ii) **Validity.** Validity refers to the extent to which an instrument measures what it is supposed to measure (Anastasi, 1982). In general, there are four types of validity: *Content validity*, sometimes called face validity, which refers to the degree to which the instrument's items actually measure the performance or characteristics that they are supposed to measure. *Concurrent validity* refers to the correspondence between instrument results and the present status or classification of an individual. *Construct validity* is a measure of the meaning of instrument scores in terms of psychological concepts pertinent to the instrument's intent. Finally,



*predicative validity* is a measure of the instrument's ability to predict some outcome like future performance, suitability, etc. (Huysamen, 1994). Teleometrics has determined the instrument's content, construct and concurrent validity and the instrument was found to be valid.

Teleometrics International even goes as far as to guarantee their instruments to be reliable and valid. Their instruments, as well as their data base, are also constantly updated. These facts, plus the South African and international normative data, provided a very strong case for using this instrument as measurement of organisational culture, instead of developing an instrument which would have unknown reliability and validity.

Due to the fact that the instrument (OCI) is copyrighted, it could not be presented in, or attached to, the thesis and therefore a brief explanation is provided of the survey format and rating procedure that it uses. For each of the forty (40) questions, three capsule answers – A, B and C – are provided. These are reference points: each is a brief description of a certain condition commonly found in organisations. Together, they provide a range of answers. One description may be right on target, another completely inaccurate, and the third partially so. The rating procedure allows you to give a more accurate picture of life in your part of the organisation. The respondent must firstly determine which of the A, B or C descriptions is *most characteristic* and secondly, what is the *degree* of description's accuracy. A sample item from the OCI can be found in Figure 4.3.

The person completing the questionnaire firstly reads over all three descriptions A, B and C to determine which of them best captures the situation in the organisation. Suppose the person chooses B – he/she must then decide how accurate B really is. If it is right on target, the person must make a mark in the circle corresponding to BB. If it is very accurate, but not extremely so, he/she should check BA. This rating means: Definitely B, but with elements of A as well. *Subscripts qualify ratings.*

By the same token, apparent opposites can be combined. Suppose the person selects A as most characteristic, but feels that elements of C are prevalent, he/she can use the A<sub>c</sub> rating. The person is further asked to rate each question twice: “As it is” and “As I would like it to be.” Therefore, two ratings should be obtained. Firstly, an accurate characterisation of the current situation and then secondly, a rating based on how the employee would like the organisation to be under ideal conditions.

How do individual managers treat expressions of opinion in your part of the organization?														
A					B					C				
Our managers work at creating opportunities for us to express what we are thinking and feeling, encouraging us both to speak up and to help one another do so; not only do managers support us in the process, but they make it a point to open up as well.					Our managers are usually willing to hear what their people have to say and will often take the time to listen when people have ideas or comments; usually managers are good listeners and people feel better for having had a chance to speak their piece.					Individual managers are intolerant of expressions of opinion, suggestions, and the like from their employees; people who volunteer their thoughts have been known to meet with ridicule, reprimand, or to be simply ignored.				
AS IT IS → <input type="radio"/> AA <input type="radio"/> A <input type="radio"/> A <sub>B</sub> <input type="radio"/> A <sub>C</sub> AS I WOULD LIKE IT TO BE → <input type="radio"/> AA <input type="radio"/> A <input type="radio"/> A <sub>B</sub> <input type="radio"/> A <sub>C</sub>					<input type="radio"/> BB <input type="radio"/> B <input type="radio"/> B <sub>A</sub> <input type="radio"/> B <sub>C</sub> <input type="radio"/> BB <input type="radio"/> B <input type="radio"/> B <sub>A</sub> <input type="radio"/> B <sub>C</sub>					<input type="radio"/> CC <input type="radio"/> C <input type="radio"/> C <sub>A</sub> <input type="radio"/> C <sub>B</sub> <input type="radio"/> CC <input type="radio"/> C <input type="radio"/> C <sub>A</sub> <input type="radio"/> C <sub>B</sub>				

FIGURE 4.3: Sample Item from the Organisational Competence Index

Source: Hall (1996)

#### 4.7.2 THE POPULATION AND SAMPLE

A research problem usually has a bearing on some or other population. Because of the size of the population, it usually is not practical or economically feasible to study all of its members in a research project. Consequently, the researcher has to rely on the data obtained from a sample of the population (Huysamen, 1994).



A distinction is made between probability samples and non-probability samples. Random samples, stratified samples, systematic samples and cluster samples are examples of probability samples, while accidental samples, purposive samples, quota samples and snowball samples are examples of non-probability samples (Emory & Cooper, 1991).

Probability sampling refers to the probability that any element in the population will be included in the sample. Thus, probability sampling is a controlled procedure that assures that each population element is given a known non-zero chance of selection (Oppenheim, 1992). This means that every member of the population has a statistically equal chance of being selected. Non-probability sampling, on the other hand, is non-random. In this case, each member does not have a known non-zero chance of being included (Oppenheim, 1992).

This research project was based on a survey that was conducted in the South African retail group, PEP Stores Ltd. The population was defined as the employees from all levels of management, from the lowest to the highest. This represents a population of 1280 employees scattered across the country due to the fact that the organisation is in the retail sector and operations are geographically scattered over the country within the context of regional organisational structures, as well as being divided into different functional units. The organisation, PEP Stores Ltd, is therefore structured to consist of: 13 regions, 60 areas and 4 functional areas. These 60 areas of the organisation were defined as separate business units for the purposes of this study.

Against this background it was decided, as a general principle, to stratify the sampling of employees in respect of geographical considerations. Therefore, a stratified sampling technique, which divides the population into homogeneous sub-groups or strata was used and the above-mentioned geographical subdivisions were used as strata. Stratified random sampling was accomplished by using simple random sampling separately for each sub-group in the sampling frame. By using stratified random sampling, the researcher can be sure that the samples will be representative of the population.

A uniform sampling fraction, which is also called proportionate stratification, was applied on all the strata (Crimp, 1981). This means that the proportion of  $n$  (the amount of elements in the sample) to  $N$  (the amount of elements in the population) is the same for every stratum. By using proportionate stratification, the researcher ensures that the correct proportion is selected from every stratum and thus the sampling error for variables that are related to the grouping method is diminished (Hoinville, Jowel & Associates, 1978).

The question may have arisen as to why only management employees were chosen to partake in this study. Hall's (1996) *competence process* is a leadership theory that is based on the premise that the leaders, or managers, create and maintain the conditions of competence for the other employees, and therefore it is the managers who determine the organisational culture. It is also only management that can make a significant contribution in changing the conditions of competence. The fact that the sample was not drawn to represent the entire organisation is an acknowledged shortcoming of this study, but one that could be theoretically defended. Even taking statistical considerations into account, it was felt that the results were probably more accurate because of this decision. The employees below management level in PEP Stores are workers of the lowest class, so much so that many are illiterate. It was concluded that broadening the population to cover the entire organisation would have complicated the research design considerably, without significantly contributing to the accuracy of the study. This conclusion was derived from preliminary field experiments.

The sampling process finally produced a sample of 1009 organisational culture questionnaires (OCI's) that were completed and returned by the employees of PEP Stores Ltd. Of the questionnaires, 21 were spoiled and could not be used, leaving 988 questionnaires that were coded and analysed.



### **4.7.3 THE MEASURES OF ORGANISATIONAL PERFORMANCE**

The organisational performance measurements (financial profit, stock losses and labour turnover) for each of the various business units were collected for the fiscal year 1998/99. These quantitative measures of the performance criteria were then converted to a 0-to-10 scale for further analysis.

### **4.7.4 PROCEDURE FOR THE GATHERING OF PRIMARY DATA**

The organisational culture questionnaires (OCIs) were distributed via the company's internal mailing system in order to minimise costs and maximise the response rate, which makes it an example of a self-administered survey. A self-administered survey is a survey in which respondents complete the instrument without the intervention of the researcher. The advantages of the self-administered survey have been described elsewhere. The questionnaires were returned in the same manner.

The organisational performance measurements (financial profit, stock losses and labour turnover) for the various business units were kindly provided by the organisation.

## **4.8 UNCONTROLLED VARIABLES**

Uncontrolled variables are 'free-floating' variables and can theoretically be of two kinds: 1) confounded variables and 2) error (Oppenheim, 1992). The confounded variables, sometimes called '*correlated biases*', have hidden influences of unknown size on the results. Essentially, this means that knowledge and understanding of the phenomena under investigation are still incomplete in important ways; there are variables other than the experimental and controlled ones but compounded with them, which can affect the results and hence produce serious misinterpretations (Mouton, 1998). Inevitably, any

research also suffers from error. Such error variables are (or are assumed to be) randomly distributed or, at any rate, distributed in such a way as not to affect the results.

The problem of interrelated independent variables has led to the development of factorial designs, whose functions are to disentangle complex sets of interrelationships. This problem led to the development of analysis-of-variance techniques. This type of analytic survey design is one of the ways in which one can approximate laboratory conditions. However, in laboratory experimentation one can create or introduce experimental variables and, while controlling for most other variables, observe the concomitant changes in the dependent variable.

In survey research one is not normally in a position to impose experimental factors or to manipulate the lives of respondents, for instance by allocating them at random to an experimental or a control group. Instead, one can select respondents who already have the characteristics required by the design and compare them with their groupings. This makes it impossible to give causal interpretation to any pattern of associations that may be found. Instead of dealing with just one experimental variable and controlling all others, the factorial design enables one to study several experimental variables in *combination*. Not only does this provide the researcher with more information, but also with greater confidence in predicting the results under various circumstances.

At the outset, the experimental variables were chosen that would be varied systematically and in combination with each other. One must aim to control all other variables by exclusion, holding constant or randomising. A multiple analysis of variance (MANOVA) was used to disentangle the concepts, controlling for the following variables:

- Age - 15 groups
- Work Situation – union members vs. non-union members
- Education – 4 levels
- Gender – male & female



- Language – 5 home languages
- Years in organisation – 10 categories
- Organisational level – 5 levels

There are probably many moderating variables that affect the relationship between the independent variable (organisational culture) and dependent variable (organisational performance) e.g. the economy, government regulation, the existence of competitors, etc. These are acknowledged, where known, and controlled as far as possible.

#### **4.9 STATISTICAL ANALYSIS**

Once all the measurements had been obtained, i.e. a measurement of each of the dimensions of organisational culture obtained from the OCI questionnaire and a measurement of each of the financial performance indicators, it was possible to proceed with the statistical analysis.

The resultant primary data was analysed using the Statistical Package for the Social Sciences (SPSS) program at the University of Stellenbosch. The analysis included the calculation of frequencies, means, standard deviations, as well as cross-tabulations, analysis of variance, correlation and regression analysis.

Due to the nature of the research problem, the correlation and regression analysis was deemed to be the most important to the study. Various other analyses could be conducted in respect of the specified sub-groups i.e. race, gender, education level, organisational level, actual-desired gap differences, etc. It was felt that these would not be included as it did not prove to be cost-effective and would not provide a significant contribution to the main theme of the research. Only those that would significantly contribute to the primary objective of the study would be used.

Due to the satisfactory nature of the response rate, it further was not necessary to conduct any statistical manipulations to rectify or compensate for a low response rate.

#### **4.10 SUMMARY**

While a number of attempts have been made to measure organisational culture, the interest in this concept led to an investigation of the relationship of organisational culture with other organisation-level variables, and more specifically also organisational performance.

Studies showed that companies with particular cultures reaped a return on investment that averaged nearly twice that of firms with less efficient cultures, which led to the conclusion that cultural and behavioural aspects of organisations were intimately linked to both short-term performance and long-term survival. However, the existence of a positive link between organisational culture and performance did not gain unanimous acceptance, due to the complex nature thereof. A further deficiency of the previous research was that it was mostly based on arguments that were conceptual and anecdotal, or case studies without formal measurement of either of the two constructs.

The purpose of the present study was therefore to quantitatively explore the relationship between organisational culture and organisational performance within a South African company. The proposed hypotheses, which are based on this research problem, were also briefly described.

Research can be described as a process of systematic enquiry and is a procedure by which the researcher attempts to systematically find, with the support of demonstrable fact, the answer to a question or the resolution of a problem. Research methodology, on the other hand, can be viewed as being the logic of implementing scientific methods in the study of reality and this has two basic purposes: 1) to provide answers to research questions and 2) to control variance.



The methodology that was followed in this study was the postal survey method, which was used to provide answers to the research problem. In order to address the research problem adequately, two sources of information were analysed. Firstly, data that was derived from published sources (secondary data) and, secondly, data that was generated directly from the source of information (primary data). The primary data was then obtained according to the research design that has been discussed with the help of a flow diagram.

It was decided to make use of the Organisational Competence Index (OCI) to measure organisational culture. This instrument was chosen because it is one of the few that have been validated through a systematic programme of research carried out within actual operating organisations.

The sampling method that was applied to the organisation was also discussed and the result of this process was a sample of 988 employees of PEP Stores Ltd. The sample was further stratified into the 60 business units or areas spread throughout Southern Africa. A brief discussion of the uncontrolled variables and the method of statistical analysis concluded the chapter.

## CHAPTER 5

### THE PRESENTATION OF THE STATISTICAL FINDINGS AND TESTING OF THE RESEARCH HYPOTHESES

#### 5.1 INTRODUCTION

For the purpose of this study, the data is treated in such a way as to reveal the relationship between the perception of organisational culture (independent variable) in relation to the concepts used as criteria of organisational performance (*dependent* variables).

The method used for the collection of data was determined by the decision to use the Organisational Competence Index (OCI) as measure of organisational culture. This measuring instrument was chosen because it is internationally recognised and has proven reliability and validity. The OCI was discussed in chapter four.

The raw data is representative of the scores obtained from 988 respondents that were stratified into 60 business units or areas. The organisational performance data for each of these areas was obtained from the organisation.

The chapter begins by describing the sample demographics, measurement results that were obtained by means of the research methodology described in the previous chapter, and the computation of the statistical relationship between the two variables. A brief overview is given of the research hypotheses and the chapter concludes with the testing of the hypotheses.



## **5.2 THE SAMPLE**

The sampling process discussed in chapter four produced a sample of 988 employees. The scores received from the respondents was differentiated into:

- Divisions – 4 divisions
- Stock Controllers – 4 administrative regions
- Age - 15 groups
- Work Situation – union members vs. non-union members
- Education – 4 levels
- Gender – male & female
- Language – 5 home languages
- Years in organisation – 10 categories
- Organisational level – 5 levels
- Areas – 60 areas
- Regions – 13 regions

The differentiation of the organisation into the 60 areas was the most important for the purposes of this study. See Addendum A for the sample demographics.

## **5.3 MEASUREMENT RESULTS**

Two types of measures of organisational culture were used in the statistical analysis:

- An average score for each of the dimensions of organisational culture as measured in each of the 60 business units or areas.
- A score indicating the degree of variation in the average score for each of the 60 business units in respect of the organisational culture dimensions.

The average raw scores for each of the dimensions of organisational culture, as measured by the OCI, can be found in the various sub-reports in Addendum B. These raw scores were converted to percentiles using the percentile conversion table found in the manual *How to interpret your scores from the Organisational Competence Index*. These percentiles permit a direct comparison of the scores obtained with those of individuals in other organisations in the normative database.

Addendum B consists of 5 Tables that represent the above-mentioned raw scores of the organisational culture dimensions categorised into the following sub-reports.

Table 1	Summary of Sub-report -Age
Table 2	Summary of Sub-report –Work situation, Gender and Education
Table 3	Summary of Sub-report –Years of Service
Table 4	Summary of Sub-report – Position Level
Table 5	Summary of Sub-report – Areas

The organisational culture dimension scores for each dimension, per area, comprised the average score of all the respondents in that particular area or business unit. Inevitably, a degree of variation occurred in respect of each average culture score. It may, therefore, be argued that a small variation in the organisational culture dimension score represent a higher degree of shared perception than would have been the case if the variation was larger.

To measure the variation in average organisational culture dimension scores, the coefficient of variation (standard deviation divided by the arithmetic mean) was computed for each average organisational culture dimension score in respect of each area.

The measurements for the chosen criteria of organisational performance (financial profits, stock losses and labour turnover) for each of the business units (n=60) were further received from the organisation.



## 5.4 THE STATISTICAL RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE AND ORGANISATIONAL PERFORMANCE

To establish the relationship between organisational culture and financial performance, the product moment (or Pearson) correlation coefficient ( $r$ ) was computed between the average organisational culture dimension scores for the 60 areas, and the measured organisational performance indicators for the aforementioned areas. The correlation coefficients are reported in Table 5.1.

**TABLE 5.1: Correlation coefficients indicating the relationship between the dimensions of organisational culture and the three indicators of performance. (n = 60)**

<b>Organisational Culture Dimension</b>	<b>Stock losses</b>	<b>Profit</b>	<b>Labour turnover</b>
Collaboration	-0.261*	+0.408***	-0.447****
Commitment	-0.263*	+0.473****	-0.468****
Creativity	-0.302*	+0.534****	-0.372***
Leadership / Management values	-0.262*	+0.392***	-0.503****
Access Leadership/ Support Structure	-0.268*	+0.327**	-0.517****
Leader / Managerial Credibility	-0.319**	+0.477****	-0.518****
Climate	-0.264*	+0.414***	-0.350***
Authority Relationships / Impact	-0.264*	+0.355****	-0.374***
Relevance / Work Incentives	-0.267*	+0.585****	-0.590****
Teamness / Community	-0.314**	+0.484****	-0.693****
Work Processes / Task Environment	-0.263*	+0.385***	-0.263*
Social context / processes	-0.579****	+0.559****	-0.643****
Problem Solving Processes	-0.263*	+0.505****	-0.274*

\*       $p < 0.05$       \*\*\*       $p < 0.01$   
 \*\*       $p < 0.02$       \*\*\*\*       $p < 0.001$

As is evident from Table 5.1, positive relationships were found to exist between profit and all of the organisational culture dimension measurements. Negative relationships were found between stock losses and labour turnover, and the aforementioned organisational culture measures. All of these relationships were also found to be statistically significant, at least, at the 0.05 level.

The coefficient of determination is the square of the correlation coefficient. It indicates what percentage of the total variance of x that is explained by the variance of y (Bless & Kathuria, 1993). This percentage is given by the expression  $r^2 \times 100$ .

**TABLE 5.2: Coefficients of Determination expressed as a Percentage**  
**( $r^2 \times 100$ ) derived from TABLE 5.1.**

<b>Organisational Culture Dimensions</b>	<b>Stock losses</b>	<b>Profit</b>	<b>Labour turnover</b>
Collaboration	6.81%	16.65%	19.98%
Commitment	6.92%	22.37%	21.90%
Creativity	9.12%	28.52%	13.84%
Leadership / Management values	6.86%	15.37%	25.30%
Access Leadership/ Support Structure	7.18%	10.69%	26.73%
Leader / Managerial Credibility	10.18%	22.75%	26.83%
Climate	6.97%	17.14%	12.25%
Authority Relationships / Impact	6.97%	12.60%	13.98%
Relevance / Work Incentives	7.13%	34.22%	34.81%
Teamness / Community	9.86%	23.43%	48.02%
Work Processes / Task Environment	6.91%	14.82%	6.92%
Social context / processes	33.52%	31.25%	41.35%
Problem Solving Processes	6.92%	25.50%	7.51%



The coefficient of determination between the dimensions of organisational culture and the indicators of performance, as expressed as a percentage ( $r^2 \times 100$ ), can be found in Table 5.2.

Computing the coefficient of variation, as described above, arrived at the variations in average culture scores per area or business unit. To establish the relationship between the variation in average culture dimension score and the indicators of performance, the product moment correlation coefficient was computed between these two measures.

As is evident from Table 5.3, negative relationships were found to exist between all the scores measuring variation in the average organisational culture dimension and financial profit. It is further evident from Table 5.3, that positive relationships were found to exist between all the scores measuring variation in the average organisational culture dimension and the remaining performance indicators (stock losses and labour turnover). In all instances the relationships proved to be statistically significant at the 0.05 level.

The coefficients of determination between the variation in the dimensions of organisational culture scores and the indicators of performance, as expressed as a percentage ( $r^2 \times 100$ ), are provided in Table 5.4.

## **5.5 TESTING THE HYPOTHESES**

The statistical findings were further examined and applied in the testing of the hypotheses that were stated in chapter four. The research results are interpreted in the next chapter in terms of the theoretical framework that was used to explain the relationship between organisational culture and performance.

The primary concern of this study is the testing of statistically based hypotheses. The methods employed to extract meaning have been those techniques generally referred to as belonging to the domain of inferential statistics.

To measure the extent of the association between the organisational culture measurements and the performance measurements, Pearson's product moment correlation coefficient was computed. With regard to testing the significance of the coefficients obtained by means of the statistical tests referred to above, the level of significance for a two-tailed test was set, at least, at the 0.05 level in all instances. In some instances the correlation coefficients were found to be significant at higher levels ( $p < 0.02$ ,  $p < 0.01$  and  $p < 0.001$ ) and there are indicated as such.

**TABLE 5.3: Correlation coefficients indicating the relationship between the variation in the organisational culture dimensions and the three indicators of performance. (n=60)**

<b>Variation in Organisational Culture Dimension</b>	<b>Stock losses</b>	<b>Profit</b>	<b>Labour turnover</b>
Collaboration	+0.306*	-0.314**	+0.273*
Commitment	+0.287*	-0.274*	+0.264*
Creativity	+0.268*	-0.262*	+0.302*
Leadership / Management values	+0.304*	-0.296*	+0.292*
Access Leadership / Support Structure	+0.281*	-0.291*	+0.279*
Leader /Managerial Credibility	+0.273*	-0.286*	+0.287*
Climate	+0.288*	-0.278*	+0.279*
Authority Relationships / Impact	+0.291*	-0.267*	+0.298*
Relevance / Work Incentives	+0.307*	-0.285*	+0.276*
Teamness / Community	+0.299*	-0.304*	+0.306*
Work Processes / Task Environment	+0.275*	-0.275*	+0.265*
Social context / processes	+0.306*	-0.301*	+0.274*
Problem Solving Processes	+0.274*	-0.321**	+0.274*

\*  $p < 0.05$       \*\*\*  $p < 0.01$

\*\*  $p < 0.02$       \*\*\*\*  $p < 0.001$



**TABLE 5.4: Coefficient of Determination expressed as a Percentage  
( $r^2 \times 100$ ) as derived from TABLE 5.3**

<b>Variation in Organisational Culture Dimensions</b>	<b>Stock losses</b>	<b>Profit</b>	<b>Labour turnover</b>
Collaboration	9.36%.	9.86%	7.45%
Commitment	8.24%	7.51%	6.97%
Creativity	7.18*	6.86%	9.12%
Leadership / Management values	9.24%	8.76%	8.53%
Access Leadership/ Support Structure	4.41%	8.47%	7.78%
Leader / Managerial Credibility	7.45%	8.18%	8.24%
Climate	8.29%	7.73%	7.78%
Authority Relationships / Impact	8.47%	7.12%	8.88%
Relevance / Work Incentives	9.92%	8.12%	7.62%
Teamness / Community	8.94%	9.24%	9.36%
Work Processes/ Task Environment	7.56%	7.56%	7.02%
Social context / processes	9.36%	9.06%	7.51%
Problem Solving Processes	7.51%	10.30%	7.51%

The correlation analysis follows from regression analysis in so far as the latter expresses mathematically the law underlying the relationship, i.e. the equation of the regression line or the specific curve describing the relationship (Bless & Kathuria, 1993), whereas correlation analysis indicates how well the data of a given problem satisfies the mathematical expression.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. Seven models were computed for each of the sets of data to determine which of them would explain the most variance.

The seven models were the:

- i) Linear model  $- Y = A + B \times X;$
- ii) Power model  $- Y = A + X^B;$
- iii) Exponential model  $- Y = A \times \text{EXP} (B \times X);$
- iv) Logarithmic model  $- Y = A + B \times \text{LN} (X);$
- v) Reciprocal X model  $- Y = A + (B/X);$
- vi) Reciprocal Y model  $- Y = 1 / (A + B \times X);$  and the
- vii) Reciprocal X&Y model  $- Y = X / (A + B \times X).$

Even though regression models/equations were determined to explain the relationship between the experimental variables, it does not mean that they can be used to predict organisational performance, especially long into the future, from the determined strength of the conditions of competence. If a prediction is made, it must be made with great cautiousness. From a methodological standpoint, it would be problematic to predict ongoing organisation performance from any organisational culture measure obtained at a specific time (T1). Even if culture has a strong influence on how well employees do their jobs and how well the aggregate company performs, too many unforeseen external events can acutely affect corporate results.

### 5.5.1 TESTING HYPOTHESIS ONE

Hypothesis one, which stated that a negative relationship exists in the business units or areas between stock losses and the thirteen organisational culture dimensions that were measured by the OCI, was tested by computing the product moment correlation coefficient between the average organisational culture scores obtained from the 988 employees for each of the 60 areas, per dimension and supporting condition, and the measurements of stock losses obtained for those areas.



This hypothesis was divided into thirteen sub-hypotheses ( $H_{01.1}$ ,  $H_{01.2}$ , ...,  $H_{01.13}$ ) that hypothesised the relationships of each of the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* and the supporting conditions thereof, as obtained with the OCI, with stock losses as indicator of organisational performance. The correlation coefficients, the coefficients of determination and the regression models for each of the hypotheses ( $H_{01.1}$ ,  $H_{01.2}$ , ...,  $H_{01.13}$ ) are provided in Addendum C.

In the light of the results obtained, which are reported in Table 6.1 and Addendum C, it was found that negative correlation coefficients exist between all of the dimensions of organisational culture and stock losses. These correlation coefficients were found to be statistically significant, at least at the 0.05 level.

The null hypothesis, namely that there exists no correlation between the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* - and the supporting conditions thereof, as obtained with the OCI and stock losses, as indicator of organisational performance, can most probably be rejected in favour of the alternative hypothesis. The alternative hypothesis, which states that a negative relationship exists in the business units or areas between stock losses and the thirteen organisational culture dimensions that were measured by the OCI is therefore accepted.

### 5.5.2 TESTING HYPOTHESIS TWO

Hypothesis two, which stated that a positive relationship exists in the business units or areas between financial profits and the thirteen organisational culture dimensions that were measured by the OCI, was tested by computing the correlation coefficient between the average organisational culture scores obtained for each of the 60 areas, per dimension and supporting condition, and the measures of financial profit obtained for those areas.

This hypothesis was, furthermore, divided into thirteen sub-hypotheses (H02.1, H02.2, ..., H02.13) that hypothesised the relationships of each of the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* - and the supporting conditions thereof, as obtained with the OCI, with financial profits as indicator of organisational performance. The correlation coefficients, the coefficients of determination and the regression models for each of the hypotheses (H02.1, H02.2, ..., H02.13) are provided in Addendum D.

In the light of the results obtained, which are reported in Table 6.1 and Addendum D, significant negative correlation coefficients were found to exist between all of the dimensions of organisational culture and stock losses. These correlation coefficients were found to be statistically significant at the 0.05 level.

The null hypothesis, namely that there exists no correlation between the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* - and the supporting conditions thereof, as obtained with the OCI and financial profits, as indicator of organisational performance, is thus rejected. It therefore seems that the alternative hypothesis can be accepted. The alternative hypothesis, which states that a positive relationship exists in the business units or areas between financial profits and the thirteen organisational culture dimensions that were measured by the OCI, is therefore accepted.

### 5.5.3 TESTING HYPOTHESIS THREE

Hypothesis three, which stated that a negative relationship exists in the business units or areas between labour turnover and the thirteen organisational culture dimensions that were measured by the OCI, was tested by computing the product moment correlation coefficient between the average organisational culture scores obtained from the 988 employees for each of the 60 areas, per dimension and supporting condition, and the measurements of labour turnover obtained for those areas.



This hypothesis was divided into thirteen sub-hypotheses ( $H_{03.1}$ ,  $H_{03.2}$ , ...,  $H_{03.13}$ ) that hypothesised the relationships of each of the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* - and the supporting conditions thereof, as obtained with the OCI, with labour turnover as indicator of organisational performance. The correlation coefficients, the coefficients of determination and the regression models for each of the hypotheses ( $H_{03.1}$ ,  $H_{03.2}$ , ...,  $H_{03.13}$ ) are presented in Addendum E.

In the light of the results obtained, which are reported in Table 6.1 and Addendum E, significant negative correlation coefficients were found to exist between all of the dimensions of organisational culture and labour turnover. These correlation coefficients were found to be statistically significant, at least at the 0.05 level.

The null hypothesis, namely that there exists no correlation between the dimensions of organisational culture - *collaboration*, *commitment*, *creativity* - and the supporting conditions thereof, as obtained with the OCI and labour turnover, as indicator of organisational performance, is rejected in favour of the alternative hypothesis. The alternative, which states that a negative relationship exists in the business units or areas between labour turnover and the thirteen organisational culture dimensions that were measured by the OCI, is therefore accepted.

#### **5.5.4 TESTING HYPOTHESIS FOUR**

Hypothesis four, which stated that a positive relationship exists in the business units or areas between stock losses and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI, was tested by computing the product moment correlation coefficient between the coefficient of variation for each of the organisational culture dimensions, and their supporting conditions, determined per area and stock losses, as measurements of performance obtained for those areas.

This hypothesis was divided into thirteen sub-hypotheses ( $H_{04.1}$ ,  $H_{04.2}$ , ..., and  $H_{04.13}$ ) that hypothesised the relationships between the coefficient of variation for each of the organisational culture dimensions determined per area, and stock losses.

In the light of the results obtained, which are reported in Table 6.3 and Addendum F, positive correlation coefficients were found to exist between the variation in organisational culture scores for each of the dimensions and stock losses. These correlation coefficients were found to be statistically significant at the 0.05 level.

The null hypothesis, namely that the business units or areas that experience greater stock losses, do not differ from those that experience smaller stock losses, in respect of the variation in the thirteen organisational culture dimensions that were measured by the OCI, is rejected. In the light of the findings it seems as if the alternative hypothesis can be accepted. The alternative hypothesis, which states that a positive relationship exists in the business units or areas between stock losses and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI, is therefore accepted.

#### **5.5.5 TESTING HYPOTHESIS FIVE**

Hypothesis five, which states that a negative relationship exists in the business units or areas between financial profits and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI, was tested by computing the product moment correlation coefficient between the coefficient of variation for each of the organisational culture dimensions - and their supporting conditions - determined per area, and financial profits, as measurements of performance that was obtained for those areas.



This hypothesis was divided into thirteen sub-hypotheses ( $H_{05.1}$ ,  $H_{05.2}$ , ..., and  $H_{05.13}$ ) that hypothesised the relationships between the coefficient of variation for each of the organisational culture dimensions determined per area, and financial profit.

In the light of the results obtained, which are reported in Table 6.3 and Addendum G, negative correlation coefficients were found to exist between the variation in organisational culture scores for each of the dimensions and financial profits. These correlation coefficients were found to be statistically significant at the 0.05 level.

The null hypothesis, namely that the business units or areas that experience greater financial profits, do not differ from those that experience smaller financial profits, in respect of the variation in the thirteen organisational culture dimensions that were measured by the OCI, is rejected. In the light of the findings it seems as if the alternative hypothesis can be accepted. The alternative hypothesis, which states that a negative relationship exists in the business units or areas between financial profits and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI is therefore accepted.

#### **5.5.6 TESTING HYPOTHESIS SIX**

Hypothesis six, which states that a positive relationship exists in the business units or areas between labour turnover and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI, was tested by computing the product moment correlation coefficient between the coefficient of variation for each of the organisational culture dimensions determined per area, and labour turnover as measurement of performance that was obtained for those areas.

This hypothesis was divided into thirteen sub-hypotheses ( $H_{06.1}$ ,  $H_{06.2}$ , .... and  $H_{06.13}$ ) that hypothesised the relationships between the coefficient of variation for each of the organisational culture dimensions – and their supporting conditions - determined per area, and labour turnover.

In the light of the results obtained, which are reported in Table 6.3 and Addendum H, positive correlation coefficients were found to exist between the variation in organisational culture scores for each of the dimensions and labour turnover. These correlation coefficients were found to be statistically significant at the 0.05 level.

The null hypothesis, namely that the business units or areas that experience a greater labour turnover, do not differ from those that experience a smaller labour turnover, in respect of the variation in the thirteen organisational culture dimensions that were measured by the OCI, is rejected. In the light of the findings it seems as if the alternative hypothesis can be accepted. The alternative hypothesis, which states that a positive relationship exists in the business units or areas between labour turnover and the variation in measurements of the thirteen organisational culture dimensions, as measured by the OCI, is therefore accepted.

## **5.6 SUMMARY OF RESEARCH RESULTS**

Table 6.5 summarises the significance of the correlation coefficients between the organisational culture dimensions, the variation within these scores, and the chosen indicators of organisational performance.

It should be noted that the average organisational culture scores correlated significantly with the indicators of performance. Stock losses and labour turnover correlated negatively with the organisational culture dimensions and financial profit correlated positively with the culture dimensions. The correlation coefficients were all significant at the 0.05 level.



**TABLE 5.5: Summary of Significant Correlation Coefficients**

	Average culture score	Average culture score	Average culture score	Variation in culture score	Variation in culture score	Variation in culture score
<b>Organisational Culture Dimension</b>	<b>Stock Losses</b>	<b>Profit</b>	<b>Labour Turnover</b>	<b>Stock Losses</b>	<b>Profit</b>	<b>Labour Turnover</b>
Collaboration	$p < 0.05$	$p < 0.01$	$p < 0.001$	$p < 0.05$	$p < 0.02$	$p < 0.05$
Commitment	$p < 0.05$	$p < 0.001$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Creativity	$p < 0.05$	$p < 0.001$	$p < 0.01$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Leadership / Management values	$p < 0.05$	$p < 0.01$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Access Leadership / Support Structure	$p < 0.05$	$p < 0.02$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Leader / Managerial Credibility	$p < 0.02$	$p < 0.001$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Climate	$p < 0.05$	$p < 0.01$	$p < 0.01$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Authority Relationships / Impact	$p < 0.05$	$p < 0.01$	$p < 0.01$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Relevance / Work Incentives	$p < 0.05$	$p < 0.001$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Teamness / Community	$p < 0.02$	$p < 0.001$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Work Processes / Task Environment	$p < 0.05$	$p < 0.01$	$p < 0.05$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Social context / processes	$p < 0.001$	$p < 0.001$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.05$
Problem Solving Processes	$p < 0.05$	$p < 0.001$	$p < 0.05$	$p < 0.05$	$p < 0.02$	$p < 0.05$

Similarly, it should be noted that the variation in organisational culture scores correlated significantly with the indicators of performance. Stock losses and labour turnover correlated positively with the variation in organisational culture dimension scores and financial profit correlated negatively with the variation in culture scores. The correlation coefficients were all significant at the 0.05 level.

## **5.7 SUMMARY**

The chapter began with a description of the sample, and the measurements obtained that were used to establish the relationship between organisational culture and financial performance. To do this, the product moment (or Pearson) correlation coefficient ( $r$ ) was computed between the average organisational culture dimension scores for the 60 areas, and the measured organisational performance indicators for the aforementioned areas.

The product moment (or Pearson) correlation coefficient ( $r$ ) was also computed between the variation in organisational culture dimension scores for the 60 areas, and the measured organisational performance indicators for the aforementioned areas.

The second section of the chapter discussed the hypotheses and the testing of the six hypotheses.



## **CHAPTER 6**

### **DISCUSSION OF THE FINDINGS**

#### **6.1 INTRODUCTION**

The primary objective of this study was to empirically investigate the relationship between organisational culture (independent variable, as measured by the Organisational Competence Index (OCI) and organisational performance (dependent variable, as defined) within a South African company.

To achieve the above-mentioned objective, the Organisational Competence Index, a measure of organisational culture, was administered to 988 employees of the organisation. These employees were stratified into 60 business units. Two types of measures of organisational culture were obtained in this way and was used in the statistical analysis: 1) An average score for each of the dimensions of organisational culture as measured in each of the 60 business units or areas, and 2) a score indicating the degree of variation in the average score for each of the 60 business units in respect of the organisational culture dimensions. The measurements for the chosen criteria of organisational performance (stock losses, financial profits and labour turnover) for each of the business units were further received.

To establish the relationship between organisational culture and the financial performance, the product moment (or Pearson) correlation coefficient ( $r$ ) was computed between the average organisational culture dimension scores for the 60 areas, and the measured organisational performance indicators for the aforementioned areas.

Computing the coefficient of variation arrived at the variations in average culture scores per area or business unit, which were then correlated with the indicators of performance, using the product moment correlation coefficient. These procedures produced the data that was reported and analysed in chapter five, which now needs to be interpreted in this chapter.

The data produced are unorganised manifestations of the truths they represent and need to be organised and analysed to reveal the underlying truths (Leedy, 1993). But, Leedy warns, even the conclusion drawn from primary data can never be deemed the “Truth Absolute”, but is merely an indication of what the truth might be. The data serves, however, to bring a glimmer of truth to the inquisitive mind of the researcher, if adequately examined for the relationships represented.

Leedy’s (1993) words, above, are descriptive of the approach and orientation that is followed in this chapter, and this study. The aim of this chapter is to examine and discuss the statistical findings that were presented in the previous chapter.

Kerlinger (1986, p. 55), had this to say about scientific proof:

“Let us flatly assert that nothing can be ‘proved’ (sic) scientifically. All one can do is to bring evidence to bear that such-and-such a proposition is true. Proof is a deductive matter, and experimental methods of enquiry are not methods of proof.”

The conclusion drawn in this chapter is therefore presented as deductions that are considered valid in light of the obtained evidence, rather than irrefutable truth. In terms of making a significant contribution to the field of organisational psychology, it is considered essential to draw conclusions based on the insights gained during research, as well as the results established by the data. It is preferable to incur the criticism that all conclusions are not clinically objective and proven by fact, rather than to lose the rich insights gained from the research.



In the words of law, the evidence for such conclusions is “such as to convince a reasonable man beyond a reasonable doubt.”

Fortunately, this is adequate in terms of research. Kerlinger (1986, p. 153) states that “evidence at satisfactory levels of probability is sufficient for scientific progress” and Hunt (1983, p. 126) says “Surely, no one would seriously propose that in order to explain anything, we must explain everything. Such nihilism would place ludicrous requirements on scientific explanation in the light of the admitted usefulness of explanations that involve potentially infinite regresses.”

The findings of the study are presented under the appropriate headings, based on those used in this manuscript, and move from more general findings to more specific ones.

## **6.2 BRIEF REVIEW OF THE DIMENSIONS OF ORGANISATIONAL CULTURE**

The research results are interpreted in terms of the theoretical framework that was described in chapter three, which explains the relationship between organisational culture and performance.

Therefore, before the findings are further discussed and interpreted, it is necessary to briefly review the dimensions, and supporting conditions for organisational culture, because they are an integral part of the hypothesised relationship. The dimensions, and their supporting conditions of competence, as described by Hall (1996) are summarised in Table 6.1.

**TABLE 6.1: The Components of Competence**

Component	Major Characteristics	When Properly Managed
Leadership Values	<ul style="list-style-type: none"> <li>• Reflects basic organisational culture</li> <li>• Affirms organisations' concern for excellence (i.e. doing the best possible work)</li> <li>• Gives evidence that management values the resources of its personnel and acknowledges the humanity of employees</li> </ul>	<ul style="list-style-type: none"> <li>• Enhances feelings of self-esteem</li> <li>• Diminishes the power-based class system</li> <li>• Instils self-confidence</li> </ul>
Access Leadership	<ul style="list-style-type: none"> <li>• Involves both the physical and psychological structuring of relationships</li> <li>• Maintains both the technical and social systems</li> <li>• Facilitates information flow</li> </ul>	<ul style="list-style-type: none"> <li>• Translates "philosophy" into action</li> <li>• Opens communication channels</li> <li>• Initiates and nurtures collaboration</li> </ul>
Leader Credibility	<ul style="list-style-type: none"> <li>• Develops basic trust in management</li> <li>• Gives evidence that management will do what it says it will do</li> <li>• Creates a norm of reciprocity</li> </ul>	<ul style="list-style-type: none"> <li>• Determines if anything will really happen</li> <li>• Promotes flexibility</li> <li>• Stimulates employee input</li> </ul>
Climate	<ul style="list-style-type: none"> <li>• Reflects the "emotional" tone of the organisation</li> <li>• Serves as a check on the system of values and practices within the organisation</li> <li>• Determines readiness for growth</li> </ul>	<ul style="list-style-type: none"> <li>• Promotes authentic working relationships among people</li> <li>• Sets a norm of spontaneity and responsiveness</li> <li>• People are not afraid to make mistakes</li> </ul>
Authority Relationships	<ul style="list-style-type: none"> <li>• People can cause things to happen</li> <li>• One's involvement or participation does lead to personal impact</li> <li>• Those who need authority get it without regard to rank or position</li> </ul>	<ul style="list-style-type: none"> <li>• Formalises the sharing of power</li> <li>• Improves morale and productivity</li> <li>• Causes people to give their "best"</li> </ul>
Work Incentives	<ul style="list-style-type: none"> <li>• People spend their time in core activities</li> <li>• There is a logical involvement in the work which allows people to find challenge and a sense of purpose</li> <li>• People can do, rather than just getting ready to do, or analysing what to do</li> </ul>	<ul style="list-style-type: none"> <li>• Sustains a sense of purpose</li> <li>• Integrates personal goals and organisational objectives</li> <li>• Lends coherence to job activities</li> </ul>



Teamness	<ul style="list-style-type: none"> <li>• Establishes interdependence and mutual reliance and respect</li> <li>• Promotes shared responsibility and a concern for the common good</li> <li>• Minimises issues of "territoriality"</li> </ul>	<ul style="list-style-type: none"> <li>• Avoids win-lose dynamics</li> <li>• Makes commitment a wide-spread commodity</li> <li>• Promotes greater identification with work group and organisation</li> </ul>
Work Processes	<ul style="list-style-type: none"> <li>• Acknowledge that work must be structured and priorities set, but minimise emphasis on conformity to procedures</li> <li>• People have access to needed resources</li> <li>• Allow personal control over work activities</li> </ul>	<ul style="list-style-type: none"> <li>• Increase creative problem-solving</li> <li>• Promote accomplishment through personal initiative</li> <li>• Eliminate inefficient methods and procedures</li> </ul>
Social Processes	<ul style="list-style-type: none"> <li>• Promote the sharing of ideas and opinions</li> <li>• Capitalise on the positive aspects of social facilitation</li> <li>• Encourage innovation and promote a norm of candour and openness</li> </ul>	<ul style="list-style-type: none"> <li>• Create excitement, not boredom, in the workplace</li> <li>• Avoid the depersonalisation of individuals</li> <li>• Make work fun, rather than a chore</li> </ul>
Problem Solving	<ul style="list-style-type: none"> <li>• Emphasises that problem solving is basically a process issue and not a task issue</li> <li>• All resources are utilised - not just those of a single individual</li> <li>• Conflict is not avoided but is utilised as a source of potential creativity</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages abstract thinking</li> <li>• Ignites collective creativity</li> <li>• Reinforces personal impact</li> </ul>

Source: Adapted from Hall (1996)

### 6.3 THE RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE AND ORGANISATIONAL PERFORMANCE AS FOUND AT PEP STORES LTD

To establish the relationship between organisational culture and financial performance, the product moment (or Pearson) correlation coefficient ( $r$ ) was computed between the average organisational culture dimension scores for the 60 areas, and the measured organisational performance indicators for the aforementioned areas.

The correlation coefficient, once obtained, provides a measurement of the degree of co-variation of the two variables (Howel, 1992). But, unless it shows a perfect correlation ( $r = \pm 1$ ), one still has to assess the effect of one variable in the variation of the other. To be more precise, one determines how much of the variability  $y$  can be attributed to  $x$ , which in turn leads to finding the significance of the correlation coefficient in order to reject a null hypothesis (Bless & Kathuria, 1993). The correlation coefficients were reported in the previous chapter in Table 5.1 and Table 5.3. Table 5.5 provided a summary of the significance of correlation coefficients that were found.

The coefficient of determination is the square of the correlation coefficient. It indicates what percentage of the total variance of  $x$  is explained by the variance in  $y$  (Bless & Kathuria, 1993). This percentage is given by the expression  $r^2 \times 100$ . The value  $r^2 = 1$  (100%) indicates that the behaviour of one variable is completely determined by the behaviour of the other.

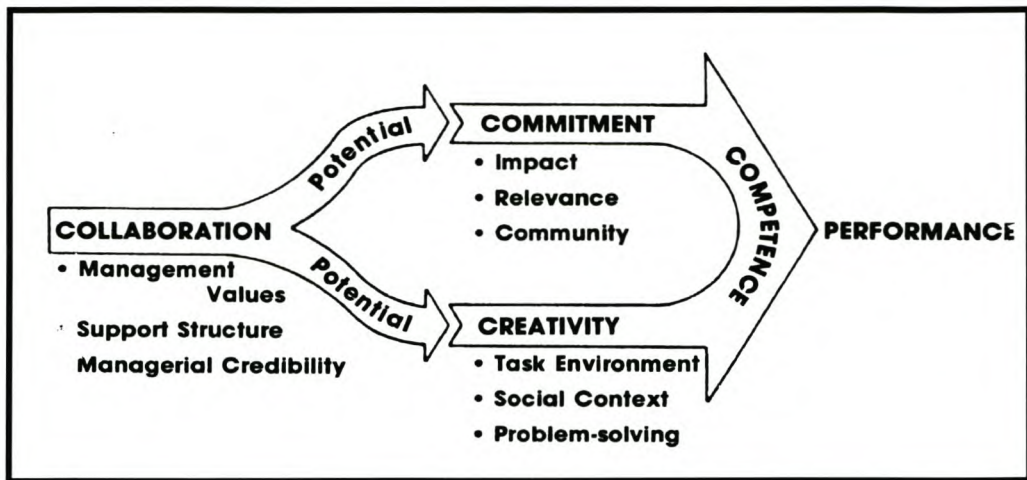
It is important to realise that  $r = 0.50$ , for example, does not mean that 50% of the variance in  $y$  is associated with the variable  $x$ . Only the proportion  $r = (0.5)^2 = 0.25$  or, equivalently, the percentage  $r^2 \times 100 = (0.5)^2 \times 100 = 25\%$  can be attributed to the influence of  $x$  on  $y$ . Furthermore, comparing coefficients, a correlation coefficient of  $r = 0.7$  will be considered as double that of  $r = 0.5$ , since the percentage of variation of  $y$  which can be accounted for by the variation in  $x$  is in the first case  $r^2 \times 100 = (0.7)^2 \times 100 = 49\%$ , and in the second only 25%.

The implication is that the correlation coefficient ( $r$ ) gives the impression that the impact of  $x$  on the variation of  $y$  is larger than it is as measured through the coefficient of determination  $r^2$  (Bohrnstedt & Knoke, 1994). The coefficients of determination, as expressed as a percentage ( $r^2 \times 100$ ), can be found in Table 5.2 and Table 5.4.

The *competence process* describes the organisational culture dimensions, with the supporting conditions of each, and proposes their relationship to



organisational performance. This proposed relationship is diagrammatically represented in Figure 6.1 and was described in chapter three.



**FIGURE 6.1: The Competence Process**

Source: Hall (1996)

### 6.3.1 THE RELATIONSHIP BETWEEN COLLABORATION AND ORGANISATIONAL PERFORMANCE

The first dimension of organisational culture, as described in the *competence process*, is *collaboration*, and the supporting conditions thereof. This dimension, with its supporting conditions, was measured by the OCI and these scores were correlated with the three indicators of performance.

*Collaboration*, and the supporting conditions thereof – leadership/management values, access leadership / support structures, leader / managerial credibility and climate – were found to:

- be significantly negatively correlated with stock losses,
- be significantly positively correlated with financial profits, and
- to be significantly negatively correlated with labour turnover.

The conclusion that can be drawn is that the business units in which the members experience *collaboration* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover, compared to those business units where members experience the *collaboration* dimension to a lesser degree.

The amount of explained variance between *collaboration* and stock losses mostly vary between 6.97% ( $r = -0.262$ ) and 10.18% ( $r = -0.319$ ). These correlation coefficients are significant enough to reject the null hypotheses, but were quite small.

The amount of explained variance between *collaboration* and profit is higher and varies between 10.69% ( $r = +0.327$ ) and 22.75% ( $r = +0.477$ ). These correlation coefficients are significant enough to reject the null hypotheses, but are still moderate.

The amount of explained variance between *collaboration* and labour turnover is the highest for the three performance indicators and varies between 25.30% ( $r = -0.503$ ) and 26.73% ( $r = -0.517$ ).

These relationships were found to be significant, some more so than others, but because so little of the variance can be explained, the conclusions need to be treated with the necessary caution.

What does this mean in the reality of the business unit, or the organisation, if one is bold enough to generalise the findings? What are the collaborative conditions that need to exist in the organisation to reap the performance benefits associated with it?

To recap, *collaboration* is a shared decision-making and problem-solving work experience. It is job analysis, planning, forecasting and the allocation of resources accomplished by people working together. With all its emotional overtones, *collaboration* is uniquely task-centred and from the doing of collaborative tasks people emerge with a feeling that they have helped shape



future events. The value of participative management is well-documented (Peters & Waterman, 1982), and the significant relationships found in this study point towards the effect that such management practices can have on the organisation.

This finding is likened to the involvement mechanism that Denison (1990) derived from the human relations theory. The central theme of the involvement mechanism is that organisational performance is a function of the level of involvement and participation of an organisation's members and is thus confirmed by the finding in this study, even though different performance criteria were used.

As a result of *collaboration*, employees have a clearer picture of what must be done, of how to do it, and a better sense of their responsibilities. People experience 'fate control' in the workplace. This does not mean that management abdicates its role or side-steps its responsibilities. Managers still stay in control of problem focus and task identification, but the employees charged with doing the work can directly influence how best to accomplish it. All employees are considered "managers" and share in the responsibility of managing all the organisation's assets, thereby placing less reliance on a formal system and more on an informal system.

*Collaboration* is, therefore, an invitation to share power. "What do you think?" or "How do you feel?" are the magic phrases managers could rely on to become participative in dealing with their subordinates. When leaders create opportunities for those affected by decisions to share in making them, they are partially divesting themselves of their formally endowed leadership power and reinvesting it in others. For those others, sharing in decision making is esteem building. It empowers and gets employees involved in the tasks to be done.

*Collaboration*, and the involvement mechanism, asserts that inclusion and participation of employees in the processes of the organisation outweigh the dissension, inconsistency and nonconformity associated with a more undemocratic internal process. By being involved, employees who have the



opportunity to contribute their knowledge, skills and decisions, therefore, will reflect multiple viewpoints, be perceived as legitimate and have a higher likelihood of effective implementation. This process, over time, results in better decisions and responses from the organisation, thus leading to better performance (Denison, 1990).

For the full potential of collaborative practices to be realised, the four support conditions are critical. A cultural backdrop must exist where opportunities to collaborate are recognised as genuine and, moreover, where there is some personal incentive to take advantage of these opportunities. In addition, the way the organisation is structured, physically and psychologically, must facilitate rather than hinder *collaboration*, information flow, geographic and logistical planning, interpersonal transactions, and organisation of the work itself must be such that *collaboration* becomes a practical fact, rather than a frustrated possibility. Finally, there must be evidence of managerial sincerity and managerial credibility where collaborative opportunities are concerned.

The competent organisation, further, is characterised by an egalitarian value system where employees are valued as individuals, not because of the work they do, and leaders trust the competence of their personnel (Hall, 1996).

The support structure characterising the competent organisation is also one wherein emotional support, at the purely social interactive level, facilitates, encourages and enhances involvement, which are the operational expressions of collaborative actions. If leaders are supportive when employees express their views, and solicit those views, they are being supportive of the collaborative ethic.

There must, furthermore, be *managerial* or *leader credibility*, which is nothing more than basic *trust*. If leaders do not enjoy credibility among their people, the effect that they have on them is automatically diminished (Hall, 1996). If a leader makes promises, provides collaborative opportunities and then does nothing at all with the inputs, the leader has no credibility. Candour must characterise the leader's communication style and people must be able to verify



the leader's intent (Hall, 1996). They must know that leaders mean what they say. In the competent organisation, when a leader asks for an opinion or suggestion, something will be done with it and people will receive feedback about the outcome. Combined, such considerations give individual leaders credibility in the eyes of the people who are being encouraged to participate.

Finally, there must be a supportive *climate* to ensure a truly collaborative system (Hall, 1996). Climate is closely interrelated and dependent upon *the leadership / managerial values* and *leader / managerial credibility* inherent to the organisation. Climate may be categorised as the general tone of the organisation, including people's feelings about the system of values and practices that characterise the workplace, and their role in it (Hall, 1996). It further represents a set of work-related feelings that sets the emotional tone of the organisation.

Employees who have enjoyed freedom to influence those decisions affecting their work – what is to be done, how it is to be accomplished, etc. – uniformly report higher potentials for job satisfaction, sense of responsibility, *commitment*, lower frustration with their work and greater pride in accomplishment, than do individuals characterised by fewer collaborative opportunities (Hall, 1996).

The feelings described above are of practical significance to organisations and their management because they have implications for whether or not employees will be inclined to do what they are capable of doing. A safe inference is that employees characterised by more positive feelings of *commitment*, responsibility and are empowered, etc., are more likely to go the extra mile and do their best in implementing work-related decisions than are dissatisfied, uncommitted, frustrated individuals. It is therefore almost logical that these satisfied workers will tend to show longer tenure, thus reducing labour turnover and greater job involvement and loyalty – contributing to profitability and lower stock losses.

This logic has been established. If one considers the significant relationships that were found to exist between the performance indicators - financial performance, stock losses and labour turnover - and *collaboration* found in this

study, one comes to the conclusion that it seems that the performance of the sub-unit, even possibly organisations, can, to a small degree, be explained by the prevalence of the above-mentioned collaborative characteristics.

### **6.3.2 THE RELATIONSHIP BETWEEN COMMITMENT AND ORGANISATIONAL PERFORMANCE**

The second dimension of organisational culture, *commitment*, and the supporting conditions thereof, were measured by the OCI and these scores were correlated with the three indicators of performance.

*Commitment*, and the supporting conditions thereof – authority relationships / impact, relevance / work incentives and teamness / community –were found to:

- be significantly negatively correlated with stock losses,
- be significantly positively correlated with financial profits, and
- to be significantly negatively correlated with labour turnover.

The conclusion that can be drawn is that the business units in which the members experience *commitment* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *commitment* dimension to a lesser degree.

The amount of explained variance between *commitment* and stock losses mostly varies between 6.97% ( $r = -0.264$ ) and 9.86% ( $r = -0.314$ ). These correlation coefficients are significant enough to reject the null hypotheses, but are quite small.

The amount of explained variance between *commitment* and profit is higher and varies between 12.60% ( $r = +0.355$ ) and 34.22% ( $r = +0.585$ ). These correlation



coefficients are significant enough to reject the null hypotheses, but are still moderate.

The amount of explained variance between *commitment* and labour turnover varies between 13.98% ( $r = -0.374$ ) and 48.02% ( $r = -0.693$ ). These relationships were found to be significant, some more so than others, but, because so little of the variance can be explained, the conclusions need to be treated with the necessary caution.

What does this mean in the reality of the business unit, or the organisation, if one is bold enough to generalise the findings? What are the *commitment* conditions that need to exist in the organisation, to reap the performance benefits associated with it?

To recap: *collaboration* creates a potential for *commitment*, but does not ensure it. The difference between these two concepts can be found in the fact that *collaboration* comprises activities that are augmented by feelings, *commitment* on the other hand involves feelings that are augmented by activities. Employees experience important feelings of personal worth and hope for the future from doing collaborative tasks. But these feelings need to be acted upon to be sustained and truly internalised. Action is thus central to maintaining the committed state.

Unless employees have *impact* or *authority relationships* within the range described by the jobs that they do, all the *collaboration* in the world is for naught (Hall, 1996). Employees must be able to see that they can make something happen. In the competent organisation, employees have *power* and direct influence and they control their own procedures and guidelines. They influence design decisions where their work is concerned and determine the best way to do their work.

Managers can collaborate until they are blue in the face, but if they have no power or impact on what is going to occur, they very quickly realise that the collaborative opportunity has been a sham and their commitment disappears

(Hall, 1996). Impact, therefore, is an extremely critical condition for achieving and maintaining a sustained high level of *commitment*.

Related to impact, are the conditions of *promoting work incentives* or *relevance*. Employees expect their talents to be used (Hall, 1996). They expect to spend their time on tasks that are important and relevant to the organisation's objective. *Commitment* has to do with power, the nature of the work itself, and with factors relevant to the work situation.

*Community* or *Teamness* is the mechanism whereby *commitment* becomes a widespread commodity. To operate as a viable force, *commitment* within the organisation must be widespread (Hall, 1996). One person's *commitment* is not sufficient to energise a total organisation.

Leaders must create a set of conditions which promote a sense of community, so that employees are encouraged to rely upon and help one another in their work. Programmes which promote individual competition, compete with a sense of community by encouraging employees to be self-centred rather than concerned with the welfare of all. This principle of *teamness* / *community* is very similar to the African principle of "*Ubuntu*". When the conditions for authority relationships, promoting work incentives and *teamness* are successfully managed for *commitment*, leaders can expect employees to be energised and poised for creative enterprise. It would seem that such managers would also be further rewarded with higher operating profits, lower labour turnover and fewer stock losses.

Denison (1990) described the consistency mechanism that emphasises the impact that a "strong" culture can have on performance. A shared system of beliefs, values and symbols widely understood by an organisation's members has a positive impact on their ability to reach consensus and carry out co-ordinated actions. Shared meaning has a positive impact because an organisation's members all work from a common framework of values and beliefs that form the basis through which they communicate. A strong culture with well-socialised members improves performance because it facilitates the



exchange of information and co-ordination of behaviour. The role that integration plays in organisational performance is also emphasised. Integration that is analogous to shared meaning, refers to the existence of a strong system of norms and expectations that is widely agreed between members and serves to regulate in a way that formal structures, rules and bureaucracy cannot achieve.

*Commitment*, as a dimension of organisational culture, is primarily a *feeling* state, but it has implications for more than morale and job satisfaction. It has direct bearing on task accomplishment. *Commitment* involves a personal desire to contribute to the success of the organisation by doing one's best in accomplishing the tasks for which one has accepted responsibility. Moreover, it is needed to do all this in a spontaneous, self-generated and self-directing way.

As such, *commitment* is the psychological energy that powers the organisational system. It must be a shared commodity, affecting as many people and tasks as possible. When the conditions for *commitment* are managed with these thoughts in mind, the manager can expect employees to be energised and poised for creative enterprise.

*Commitment* is also analogous to Denison's (1990) direction mechanism. The direction mechanism stresses the importance of a shared definition of the function and purpose of an organisation and its members, i.e. a mission. Direction provides two major influences on the functioning of an organisation. Firstly it provides purpose and meaning by defining a social role and external goals. Internally, it also defines individual roles with respect to the institutional role. By means of this process, behaviour is given intrinsic meaning that transcends functionally defined bureaucratic roles. This process of internalisation and identification contributes to short- and long-term *commitment* and leads, ultimately, to effective performance. Secondly, a sense of mission provides clear direction and goals that serve to define the appropriate course of action for the organisation and its members.

If one considers the significant relationships that were found to exist between the performance indicators - financial performance, stock losses and labour turnover

- and *commitment* revealed by this study, one comes to the conclusion that it seems that the performance of the sub-unit, even possibly organisations, can, to a small degree, be explained by the prevalence of the above mentioned characteristics of *commitment*.

### 6.3.3 THE RELATIONSHIP BETWEEN CREATIVITY AND ORGANISATIONAL PERFORMANCE

The third dimension of organisational culture, *creativity*, and the supporting conditions thereof, were measured by the OCI and these scores were correlated with the three indicators of performance.

*Creativity*, and the supporting conditions thereof – work processes/task environment, social context/ processes and problem solving processes – were found to:

- be significantly negatively correlated with stock losses,
- be significantly positively correlated with financial profits, and
- to be significantly negatively correlated with labour turnover.

The amount of explained variance between *creativity* and stock losses mostly vary between 6.91% ( $r = -0.263$ ) and 33.52% ( $r = -0.579$ ). These correlation coefficients are significant enough to reject the null hypotheses.

The amount of explained variance between *creativity* and profit is higher and varies between 14.82% ( $r = +0.385$ ) and 31.25% ( $r = +0.559$ ). These correlation coefficients are significant enough to reject the null hypotheses, but are still moderate.

The amount of explained variance between *commitment* and labour turnover varies between 7.51% ( $r = -0.274$ ) and 41.35% ( $r = +0.643$ ).



These relationships were found to be significant, some more so than others, but because so little of the variance can be explained, the conclusions need to be treated with the necessary caution.

The conclusion that can be drawn is that the business units in which the members experience *creativity* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *creativity* dimension to a lesser degree.

What does this mean in the reality of the business unit, or the organisation, if one is bold enough to generalise the findings? What are the conditions for *creativity* that need to exist in the organisation, to reap the performance benefits associated with it?

In providing for a collaborative system, the concern was with the physical and psychological structuring of relationships among people; in managing *creativity*, the physical and psychological structuring of work was addressed because, without a logistically sound task environment and availability of resources, the benefits of collaborative relationships are short-lived. By the same token, in creating conditions of *commitment*, one is more concerned with norms of mutual reliance and essentiality. But unless these are buttressed by a norm of authenticity and candour, spontaneity and fun, neither interdependence nor problem solving will be of a type to encourage *creativity*.

To recap: Organisational competence requires creative problem solving. Leaders are responsible for the internal environments of organisations and these environments directly influence the creative process. The conditions in support of the *creativity* dimension are *work processes*, *social processes* and *problem-solving processes*.

Employees may not be able to act on their creative urges unless they have *work processes* or a *task environment* which facilitates access to the resources that they need (Hall, 1996). *Creativity* requires freedom, even freedom to fail.

When every possible feature of the work is standardised, when rigid controls govern resource allocation, when departure from approved procedures is punished, and failure is not tolerated, *creativity* is squelched. But if leaders encourage experimentation and reward innovation in a free-flow *task environment* where the major emphasis is on getting the job done in the best possible way, they will often encounter a windfall of creative input and quality output. They will also, it seems receive, positive performance rewards.

Furthermore, the social dynamics of the workplace are every bit as important to *creativity* as the task environment. The *social context* or *social processes* must allow for the stimulation of social dynamics, for a creative ambience in the workplace. By taking into account the spontaneous, exuberant, risk-taking aspects of *creativity*, leaders can promote values and norms and exemplify practices that make the workplace fun and interesting place to go to rather than a place which provides the interpersonal equivalent of sensory deprivation.

The social context also defines the way employees can relate to one another in doing their work. Employees must be able to share their work experiences, to exchange ideas, and to talk candidly with one another in the course of their work. When employees are able to find camaraderie and stimulation in the workplace, and they see others as interested and dependable, they can share their own competence and draw upon that of others, even question and advise their leaders, the social conditions for *creativity* are being managed competently (Hall, 1996).

The way employees approach problem-solving tasks is a core issue in competence. There are identifiable processes and techniques, some of which are more creative than others, for approaching problem solving. The process can either close off *creativity* to a trickle, or encourage a flow of original and emergent solutions. Therefore, greater the flow of *creativity*, the greater the organisational performance.

The leaders should provide the example of approved problem-solving processes and if differences of opinion are squelched, if innovative ideas are ignored, if



"experts" have the final word and if problem solutions must be in line with the policy manual, then the creative outcome will be limited. *Creativity* is further diminished when leaders favour compromise and avoid conflict. But, if constraints on imagination are removed, if conflict is recognised as a necessary precondition for *creativity*, if common problems are managed for common acceptance, the probability of creative outcomes is greatly enhanced (Hall, 1996).

Obviously, the premise implies that organisational cultures that are characterised by more of these conditions encourage more competence and, furthermore, equip the organisations with more of a sustained capacity to respond in a creative and committed fashion to the demands of its environment (Hall, 1996). When fewer of these conditions characterise an organisation's culture, not only are its employees deprived of their opportunity for a sense of efficacy, but the overall adaptability and competence of the organisation is being tampered with as well. *Creativity* itself is further more than just a problem-solving device, it is an element which defines humanness. This is the key to organisational and individual adaptability.

If one considers the significant relationships that were found to exist between the performance indicators - financial performance, stock losses and labour turnover - and *creativity* revealed by this study, one comes to the conclusion that it seems that the performance of the sub-unit, even possibly organisations, can to a small degree be explained by the prevalence of the above-mentioned characteristics of *creativity*.

#### **6.3.4 THE RELATIONSHIP BETWEEN THE VARIATION IN SCORES AND ORGANISATIONAL PERFORMANCE**

The organisational culture scores for each of the dimensions per business unit (area) comprised the average score of all the respondents in that particular area or unit. Inevitably, there was a degree of variation in respect of each average

organisational culture dimension score. It may, therefore, be argued that a small variation in the organisational culture score represents a higher degree of shared perception than would have been the case if the variation was larger.

The variation in average culture scores per area or business units were arrived at by computing the coefficient of variation. To establish the relationship between the variation in average culture dimension score and the indicators of performance, the product moment correlation coefficient was computed between these two measures.

The variation in all of the average organisational culture dimension scores obtained were found to:

- be significantly positively correlated with stock losses,
- be significantly negatively correlated with financial profits, and
- to be significantly positively correlated with labour turnover.

The conclusion that can be drawn is that the business units in which the members experience the supporting conditions of *collaboration* to a lesser degree of variance, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the culture dimensions to a lesser degree.

The explained variance between these relationships varies between seven and nine percent. This is very small, even though these relationships were significant. The above inference should thus be handled with great care.

Hofstede (1991), who interpreted a strong culture as a homogeneous culture, used a similar approach. A weak culture was interpreted as a heterogeneous one, i.e. where respondents gave answers that varied widely. Kilman, Saxton and Serpa (1986) refer to the pervasiveness of the impact of culture, i.e. the degree to which the culture is widespread or shared among members of the organisation.



### 6.3.5 CONCLUSIONS ON THE RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE AND ORGANISATIONAL PERFORMANCE

Statistically significant correlation coefficients were found to exist, at least at the 95% confidence interval (two-tailed), between the dimensions of competence and the performance indicators, as defined. The premise of the *competence process* is verified.

It would seem, after studying Table 6.1, that on average, the relationship between labour turnover and the dimensions of organisational culture were found to be the strongest, and stock losses and organisational culture to be the weakest. This is an interesting finding due to the fact that almost no attention has been given to this indicator of organisational performance and given the value of the stock losses that occur annually in large companies.

The business units, within the organisation (PEP Stores), that fared better on the indicators of performance were found to be greater supporters of *collaboration*, *commitment* and *creativity*. In more practical terms, the dimensions of competence may well explain why some business units (possibly organisations) are productive and others are not.

The above discussion of the relationships between the dimensions of organisational culture and the three indicators of performance runs the risk of creating an impression that oversimplifies the dynamic interplay among the dimensions.

It is important to realise that the major thrust of the data is captured by the statistical analysis showing that, overall, the *combined* and *simultaneous* effect of *collaboration*, *commitment* and *creativity* constitute a significant effect on the indicators of performance. Thus, this significant relationship is based on the presence of all three the dimensions of competence, and their ten supporting conditions. The research methodology does not allow one to infer the relationship of individual conditions of competence acting on their own.

These findings should be interpreted with the caution that has already been spelled out. The explained variance between the independent and dependent variables is minimal. There are many other factors that could, and do, explain organisational performance. This also means that no generalisations can be made about organisational culture and performance that do not incorporate the relation of the culture to the business environment. Certain environments may, over time, create a certain type of organisational culture, or may require a certain type of organisational culture for survival.

The findings should also not be interpreted as universal or as a 'one best form of organisational culture' for performance. Longstanding research of repute have adequately demonstrated the need for a contingency approach that recognises the 'fit' among task, organisation and employees (Morse & Lorsch, 1970). What is suggested by the findings is that the utilisation of human resources and harnessing of human potential is an important element in the effective and successful management of the enterprise.

This study is by no means the last word on the relationship between organisational culture and organisational performance. The evidence that was generated by this study is intriguing, but not all that compelling. Organisational culture is but one determinant, among many others, of organisational performance. But as, such one, that may not be ignored.

## **6.5 SUMMARY**

The primary objective of this study is to empirically investigate the relationship between organisational culture (independent variable, as measured by the Organisational Competence Index (OCI) and organisational performance (dependent variable, as defined) within a South African company. To establish this relationship the product moment (or Pearson) correlation coefficient ( $r$ ) was computed between the average organisational culture dimension scores for the



60 areas, and the measured organisational performance indicators for the aforementioned areas.

This chapter reviewed the statistical findings described in chapter five against the backdrop of the six hypotheses stated in chapter four. The conclusions that were drawn from the results were discussed.

- It was firstly concluded that the business units in which the members experience *collaboration* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover, compared to those business units where members experience the *collaboration* dimension to a lesser degree.
- It was concluded, secondly, that the business units in which the members experience *commitment* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *commitment* dimension to a lesser degree.
- Thirdly, it was concluded that the business units in which the members experience *creativity* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *creativity* dimension to a lesser degree.
- It was lastly concluded that the business units in which the members experience the supporting conditions of *collaboration* to a lesser degree of variance, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the culture dimensions to a lesser degree.

It was stressed that it is important to realise that the major thrust of the data is captured by the statistical analysis showing that, overall, the *combined* and *simultaneous* effect of *collaboration*, *commitment* and *creativity* constitute a

significant effect on the indicators of performance. Thus, this significant relationship is based on the presence of all three the dimensions of competence, and their ten supporting conditions.

These findings should further be interpreted with the caution that has already been spelled out. The explained variance between the independent and dependent variables was found to be minimal. There are many other factors that could, and do, explain organisational performance. This also means that no generalisations can be made about organisational culture and performance that do not incorporate the relation of the culture to the business environment. Certain environments may, over time, create a certain type of organisational culture, or may require a certain type of organisational culture for survival. But the study has shown that organisational culture is a dimension of the organisation that can not be ignored.



## CHAPTER 7

### SUMMARY AND CONCLUDING REMARKS

#### 7.1 INTRODUCTION

This chapter summarises the research undertaken in this study by briefly outlining some of the major research considerations and approaches followed. A summary of the major findings and conclusions is also presented. The chapter also deals with the shortcomings of this study and is concluded with suggestions for further research.

#### 7.2 THE RESEARCH PROBLEM

The underlying problem that prompted this study was to determine whether a relationship existed between organisational culture and organisational performance within a South African organisation. The research problem, furthermore, not only focused on establishing a relationship between aspects of organisational culture and performance, but also on whether variations in the perception of organisational culture are related to organisational performance, i.e. whether the degree to which the organisational culture is widespread or shared among members of the organisation is related to organisational performance. To answer this question, six hypotheses were formulated with the intention of subjecting them to statistical analysis.

The *Competence Process* was used to provide a general framework in terms of which the relationship between the constituent dimensions of organisational

culture and organisational performance may be explained. Linking the dimensions, and supporting conditions of competence, to organisational performance, was an important step in the study of the relationship.

### **7.3 THE REVIEW OF THE LITERATURE ON ORGANISATIONAL CULTURE**

Success in business is not determined by the skills of the executives alone, nor by the visible features of the organisation. The organisation has an invisible quality – a certain style, character or way of doing things – that may be more powerful than the leadership of any one-person or organisational system. This invisible quality is the organisational culture.

The review of the literature on organisational culture revealed that research on this matter is not new and it was found that organisational culture research had already started in the nineteen twenties with the Hawthorne studies. The literature review also revealed something of the complexity of the concept. Considering the definitions of organisational culture, it is striking to realise that organisational culture is an intangible force, but one with far-reaching consequences.

Organisational culture seems to be developed mainly by the organisation's founder and is perpetuated and maintained by various socialisation programmes and human resource functions. Organisational culture also fulfils a number of important functions relating to the organisation's survival and adaptation.



## **7.4 ORGANISATIONAL PERFORMANCE**

A review of the literature on organisational performance revealed this concept to be just as complex as organisational culture. Different researchers have applied numerous measures to define organisational effectiveness and these tended to depend very much on the point of view of individual researchers.

Because of the all-pervasive nature of accounting as the language of business, financially based indicators are universally adopted to measure organisational performance. Taking the various arguments and proposed measures into consideration, it was decided to use the following three objective performance criteria: 1) financial profits; 2) stock losses; and 3) labour turnover (indicative of the voluntary survival rate).

The three measures that were used to determine organisational effectiveness and performance should not be viewed as an attempt to negate the other possible indicators of organisational performance. In choosing them, it was felt that this study should get back to the basics. Commercial organisations ultimately have one important "bottom line", to create wealth for all associated with the organisation and therefore to be financially successful. Thus, the indicators of organisational performance that were used are all directly relevant and based on the so-called financial "bottom line" of the organisation.

## **7.5 THE MEASUREMENT INSTRUMENT OF ORGANISATIONAL CULTURE**

There are a number of instruments that attempt to measure the dimensions of organisational culture. After a review of those that are available, it was decided to make use of the Organisational Competence Index (OCI).

The 40-item OCI, which forms part of the Organisation Culture Analysis (OCA), is designed to assess conditions for competence within an organisation, both in terms of “the way it is” (actual conditions) and “the way it might be” (desired conditions). It results in scores for the three dimensions and ten supporting conditions of competence as described in the *competence process*.

The dimensions and components of competence that are measured by the OCI are based on those proposed in Jay Hall’s (1996) *Competence Process* theory.

## **7.6 THE POPULATION AND SAMPLE**

The sampling process finally produced a sample of 988 organisational culture questionnaires (OCIs) that were completed and returned by the employees of PEP Stores Ltd. The organisation was divided into 60 areas or business units that were stratified throughout the organisation. A stratified sampling technique was used and the above-mentioned geographical sub-divisions were used as strata.

## **7.7 PROCEDURE FOR THE GATHERING OF PRIMARY DATA**

The organisational culture questionnaires (OCI’s) were distributed via the company’s internal mailing system in order to minimise costs and maximise the response rate, which makes it an example of a self-administered survey.

The organisational performance measurements (financial profit, stock losses and labour turnover) for the various business units were provided by the organisation.



## **7.8 THE COMPETENCE PROCESS**

The *competence process* provides the theoretical relationship between the two studied variables and it is on this theory that this study was based. Based on the competence theory, it is hypothesised that the dimensions of organisational culture or competence – *collaboration*, *commitment*, *creativity* and the supporting conditions thereof, are directly proportional to the potential for performance.

The research methodology that was followed by this study does not allow any causal inferences to be made concerning the relationship between the variables. As stated above, the Competence Process merely provides an explanation of the relationship between the variables.

## **7.9 THE STATISTICAL RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE AND PERFORMANCE**

To establish what the relationship is between the average organisational culture scores and the performance indicators, the product moment correlation coefficients were computed between each area's average organisational culture dimensions scores (n=60) and the three indicators of performance.

Computing the coefficient of variation arrived at the variation in average culture dimension scores per area. To establish the relationship between the variation in average culture dimension scores and the performance indicators, the correlation coefficients were computed between these measures. All of the above relationships were found to be significant, at least, at the 0.05 level.

## 7.10 ANALYSIS OF THE STATISTICAL FINDINGS

As already indicated, the primary concern of this study is the testing of statistically based hypotheses. The methods employed to extract meaning have been those techniques generally referred to as belonging to the domain of inferential statistics.

The findings and conclusions arrived at were summarised as follows:

- The first conclusion that could be drawn was that the business units in which the members experience *collaboration* and the supporting conditions thereof to a greater degree, were likely to be more profitable, to experience fewer stock losses and lower labour turnover, compared to those business units where members experience the *collaboration* dimension to a lesser degree.
- The second conclusion that could be drawn was that the business units in which the members experience *commitment* and the supporting conditions thereof to a greater degree, were likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *commitment* dimension to a lesser degree.
- The third conclusion that could be drawn was that the business units in which the members experience, *creativity* and the supporting conditions thereof to a greater degree, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the *creativity* dimension to a lesser degree.
- The fourth conclusion that could be drawn was that the business units in which the members experience the supporting conditions of *collaboration* to a lesser degree of variance, are likely to be more profitable, to experience fewer stock losses and lower labour turnover compared to those business units where members experience the culture dimensions to a lesser degree.



Statistically significant correlation coefficients were found to exist, at least at the 95% confidence interval (two-tailed), between the dimensions of competence and the performance indicators, as defined. The business units within the organisation (PEP Stores) that fared better on the indicators of performance were found to be greater supporters of *collaboration*, *commitment* and *creativity*. In more practical terms, the dimensions of competence may well explain why some business units (possibly organisations) are productive and others are not.

The above relationships between the dimensions of organisational culture and the three indicators of performance runs the risk of creating an impression that oversimplifies the dynamic interplay among the dimensions. It is important to realise that the major thrust of the data is captured by the statistical analysis showing that, overall, the *combined* and *simultaneous* effect of *collaboration*, *commitment* and *creativity* constitute significant relationships with the indicators of performance. Thus, these significant relationships are based on the presence of all three the dimensions of competence, and their supporting conditions.

## 7.11 IMPLICATIONS OF THE FINDINGS

This study followed a very straight forward ‘bottom line’ approach to the organisational culture and organisational performance link and one is left with the question: Looking back over that which this study has uncovered, what is the ‘bottom line’ of thereof? What has this study achieved and what implications does the findings have for the HR manager / practitioner?

If excellence is an organisational goal, it seems that the manager has what it takes to achieve this goal. Employees have the *desire* and the *ability* to do good work and to be productive. *Employees are competent*. The achievement of excellence requires both a widespread competence among employees and an environment that *encourages* and *enables* the expression of that competence. Managers have been blessed with the first, but have failed with the latter condition. It would seem that many organisations have been created so as to

*punish*, rather than encourage, and *suppress*, rather than enable, a full expression of human competence.

For organisations to achieve excellence, managers must work towards a state of *unsuppressed competence*. Excellence resides within every individual in the guise of unexpressed competence that creates a tension in the employee. Unexpressed competence is, unfortunately, often misinterpreted as incompetence.

The dimensions of competence, and the supporting conditions thereof, spells out in detail the mechanics of a organisational culture that can be created by managers which both supports and releases human competence for the fullest expression thereof, in the doing of organisational work. It would seem that the creation of such an organisational culture can not only provide intrinsic rewards to the participants, but also extrinsic financial rewards to the organisation. In spite of the fact that the relationships between the dimensions of organisational culture and performance are small, it is more important to realise that they are significant and for this reason they may not be ignored.

Standing at the turn of a millennium, those that hold power in organisations are going to be faced with still greater challenges than ever before and being forced to struggle for survival in an increasingly competitive environment. Managers are going to have to be innovative in their approach and make use of every possible route to achieve productivity and excellence.

The 'bottom line' is therefore, the creation of an organisational culture by the HR manager (and remember, every manager that manages people is a HR manager) where:

- employees share in decision making,
- employees experience true autonomy,
- employees can trust management,
- employees are valued as individuals
- employees experience a sense of community



- employees experience creative freedom, (to name but a few),

seem to have an effect on the financially based indicators of organisational performance.

## **7.12 SHORTCOMINGS OF THE STUDY**

Probably, the single-most important shortcoming of this study lies in the fact that any generalisation of the findings to organisations in general would be risky due to the fact that the study was conducted in one organisation. Thus, strictly speaking, the findings are only relevant to PEP Stores and were delimited as such.

This study, further, like many others (Denison, 1990; Gordon & DiTomaso, 1992) suffers from the same shortcoming in so far as they measure organisational culture at one point in time and performance over a longer period. In neither, for instance, is it possible to determine whether subsequent changes in organisational culture actually caused their performance to change, rather than the changes in performance being a sustained effect from the organisational culture at the time of the survey.

From a methodological standpoint, the current study also points to the difficulties of trying to predict ongoing corporate performance from any measurement obtained at one point in time. Even if organisational culture has a strong influence on how well employees do their jobs and how well the aggregate company performs, external events can acutely affect corporate results.

The findings should further not be interpreted as universal or as a 'one best form of organisational culture' for performance. These findings should also be interpreted with caution as the relationships, though significant, are not very strong.

This study is by no means the last word on the relationship between organisational culture and organisational performance. The evidence that was generated by this study is intriguing, but not all that compelling. Organisational culture is but one determinant, among many others, of organisational performance.

### **7.13 RECOMMENDATIONS FOR FUTURE RESEARCH**

The study of organisational behaviour remains a vast, dynamic and complex field. Outlined hereunder, are a few recommendations with regard to further study that presented themselves during the execution of this project.

Clearly, the composition and effects of organisational culture are highly complex, and a great deal more study is required to sort out the pieces and the relevant relationships. The study also suggests that the dynamic interaction of the various dimensions of organisational culture, not only among themselves, but also among other elements within the organisational system need to be further explored.

A longitudinal study, not only focussing on the relationship between organisational culture and organisational performance at a given point but over a longer time period, would be valuable to determine the stability of the measures for organisational culture.

If one would like to examine this relationship between organisational culture and organisational performance and be able to generalise the findings to organisations in a broader sense, a sample that is representative of all companies needs to be studied. Even if a South African study is done, the sample should represent all companies in South Africa.



Many more constructs measured by the OCI can be used in other research projects, e.g. *creativity*, energy-, and balance measures that are obtained. An interesting facet of the OCI that definitely warrants further study is the measured culture gap, which is the difference between the actual and desired culture scores.

#### **7.14 CONCLUDING REMARKS**

The ‘back-to-the-basics’ motivated choice of performance measures makes this study in a way unique. It is further one of only two studies of its nature that could be found in South Africa, and the only one that specifically used labour turnover and stock losses as measures of performance. Even internationally, no other study could be found that used stock losses as a measure of performance.

Recognising that many factors influence the performance of organisations, that the relationships involved are complex, that it is difficult to measure the various factors and the fact that this kind of research is almost impossible to do with great rigour, should not stifle the interest in this area of organisational psychology. These problems should rather be regarded as challenges that are placed before the organisational psychologist.

This study has shown that the creation of certain organisational cultures can enhance organisational performance and free the potential available within employees. If South African managers accept this fact, and manage the competence available to them so that the maximum amount of potential can be expressed with the least amount of interference, this study would make a contribution to the generation of wealth that is needed in this country. The organisation is not the only party to benefit; it would create a win-win situation for employee and employer. There are many benefits for the employee as well, some of which is empowerment, satisfaction and actualisation to name but a few.

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## **ADDENDUM A:**

### **SAMPLE DEMOGRAPHICS**



## **SAMPLE DEMOGRAPHICS**

<b><u>SUB-REPORTS:</u></b>	<b><u>No. of Respondents</u></b>
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PEP Stores	988
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### **Divisional Sub-reports**

1) BLNS	56
2) North	459
3) South	352
4) Central	106

### **Stock Controllers:**

1) Admin Eastern Cape	5
2) Admin Northern Cape	6
3) Admin South West	5
4) Admin Southern Cape	15

### **Age:**

1) 20-23 years	37
2) 24-25 years	42
3) 26-27 years	53
4) 28-29 years	70
5) 30-31 years	90
6) 32-33 years	80
7) 34-35 years	85
8) 36-37 years	68

9) 38-39 years	75
10) 40-41 years	48
11) 42-43 years	73
12) 44-46 years	83
13) 47-49 years	51
14) 50-53 years	49
15) 54-65 years	39

**Work Situation:**

1) Union members	815
2) Non-union members	15

**Gender:**

1) Male	396
2) Female	575

**Education:**

1) Grade 8 or lower	260
2) Grade 9 & 10	100
3) Grade 11 & 12	30
4) Diploma or degree	369

**Home Language:**

1) Zulu	42
2) Xhosa	38
3) Sotho	74



4) Afrikaans	601
5) English	235

**Years with the organisation:**

1) Less than 1 year	91
2) 1 year	117
3) 2-3 years	121
4) 4-5 years	116
5) 6-7 years	84
6) 8-10 years	143
7) 11-13 years	98
8) 14-17 years	92
9) 18-22 years	64
10) 23-28 years	49

**Organisational level:**

1) Top management	10
2) Upper management	41
3) Middle management	147
4) Lower management	748
5) Non-management	42

**Regions:**

1) Lesotho	6
2) Swaziland	15
3) Botswana	25
4) Northern Province	103
5) North West Province	98

6)	Gauteng	25
7)	Mpumalanga	77
8)	KwaZulu-Natal	75
9)	Southern Cape Province	55
10)	Western Cape Province	94
11)	Eastern Cape Province	75
12)	Transkei	21
13)	Free State	89

**Areas:**

1)	Lowveld	18
2)	Bophuthatswana	14
3)	Northern Free State	12
4)	Far North	21
5)	Gold Reef	10
6)	Northern Natal	13
7)	Pietersburg	20
8)	Pretoria	17
9)	Ermelo	7
10)	Highveld	13
11)	PEP Reef	6
12)	Pretoria Suburbs	15
13)	Natal South Coast	13
14)	Winelands	16
15)	Kokstad	14
16)	Helderberg	16
17)	Garden Route	12
18)	Eastern Cape	10
19)	Little Karoo	15
20)	Port Elizabeth	9
21)	Ciskei	14
22)	Bloemfontein	14



23)	Goldfields	16
24)	Maluti	10
25)	Northern Cape	11
26)	Southern Lesotho	3
27)	Wildtuin	15
28)	Johannesburg	13
29)	Standerton	3
30)	Venda	15
31)	Vaal Triangle	9
32)	Pietermaritzburg	5
33)	Bushveld	12
34)	West Rand	16
35)	Natal East Coast	4
36)	Overberg	15
37)	Port Elizabeth Midlands	14
38)	Southern Peninsula	16
39)	North Eastern Cape	9
40)	Transkei Inland	5
41)	Vaalharts	13
42)	Swaziland	15
43)	Eastern Free State	12
44)	South Botswana	6
45)	Diamond Field	16
46)	Northern Botswana	6
47)	Klerksdorp	10
48)	Natal North Coast	3
49)	Mafikeng	19
50)	East Rand	7
51)	Zululand	6
52)	Boland	16
53)	West Coast	15
54)	Transkei Wild Coast	6
55)	Central Botswana	10
56)	Sun City	17

57)	Coal Fields	13
58)	Natal Midlands	33
59)	Boesmanland	16
60)	East London	5



**ADDENDUM B:**

**OCI SCORES PER SUB-REPORT**

<b>Table 1</b>	<b>Summary of Sub-Report -Age</b>
<b>Table 2</b>	<b>Summary of Sub-Report –Work Situation, Gender and Education</b>
<b>Table 3</b>	<b>Summary of Sub-Report –Years of Service</b>
<b>Table 4</b>	<b>Summary of Sub-Report – Position Level</b>
<b>Table 5</b>	<b>Summary of Sub-Report – Areas</b>

Table 1: Summary of Sub Report -Age

Code	No. of People	Overall Competence		Collaboration		Commitment		Creativity		Balance Index		Polarity Index		Energy Index		Sequence Index		Climate	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	47	81	49	88	44	82	47	74	0.99	0.80	-0.03	+0.46	-0.34	0.26	0.02	0.12	45	77
1) 20-23 YEARS	37	40		39				43	78			-0.11		-0.42					80
2) 24 & 25 YEARS	42	40	84		92	33				0.68		-0.11	+0.52	-0.42	0.36				
3) 26 & 27 YEARS	53	51						51									0.15		
4) 28 & 29 YEARS	70		84					43							0.36			36	
5) 30 & 31 YEARS	90																		
6) 32 & 33 YEARS	80																		
7) 34 & 35 YEARS	85																	49	
8) 36 & 37 YEARS	68		75			74		68						0.09				49	71
9) 38 & 39 YEARS	75					85										0.0			
10) 40 & 41 YEARS	48		75		82	73	51			0.97	0.90				0.09				
11) 42 & 43 YEARS	73			55						1.0						0.06			
12) 44, 45 & 46 YEARS	83									1.0									
13) 47, 48 & 49 YEARS	51							51									0.15		
14) 50 TO 53 YEARS	49			56		51	85	51				0.03		-0.27			0.08	49	
15) 54 TO 65 YEARS	39												-0.39				0.08		

Code	No. of People	Leadership Values		Access Leadership		Leader Credibility		Authority Relationships		Work Incentives		Teamwork		Work Processes		Social Processes		Problem Solving	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	53	89	43	72	45	82	38	78	44	86	46	77	41	66	54	84	44	68
1) 20-23 YEARS	37			34		35													75
2) 24 & 25 YEARS	42	43	92		75		89			30		32							
3) 26 & 27 YEARS	53																		
4) 28 & 29 YEARS	70				75													37	
5) 30 & 31 YEARS	90																		
6) 32 & 33 YEARS	80																		
7) 34 & 35 YEARS	85					50					89			46		50			
8) 36 & 37 YEARS	68						75		71		77					50			
9) 38 & 39 YEARS	75								82		89			46	72				
10) 40 & 41 YEARS	48				66								68			64			61
11) 42 & 43 YEARS	73			50										37					
12) 44, 45 & 46 YEARS	83				75														
13) 47, 48 & 49 YEARS	51		85																
14) 50 TO 53 YEARS	49	64						44		51	89	53	84				81	52	
15) 54 TO 65 YEARS	39				66			29							56		81		



Table 2: Summary of Sub Report –Work situation, Gender Stellenbosch University <http://scholar.sun.ac.za>

CODES	No of people	Overall Competence		Collaboration		Commitment		Creativity		Balance Index		Polarity Index		Energy Index		Sequence Index		Climate	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	47	81	49	88	44	82	47	74	0.99	0.80	-0.03	-10.46	-0.34	0.26	0.02	0.12	45	77
WORK SITUATION																			
NON UNION	815	46	82	48	89	44	82	46	74	1.00	0.77	-0.04	0.47	-0.35	0.30	0.02	0.13	43	77
UNION	15	53	69	57	82	52	71	49	54	0.98	0.63	0.03	0.25	-0.27	-0.04	0.04	0.16	58	69
GENDER																			
FEMALES	575	48	79	52	87	45	79	46	70	0.99	0.75	-0.02	0.41	-0.33	0.20	0.03	0.13	48	76
MALES	396	45	85	45	90	43	85	48	79	0.99	0.85	-0.05	0.53	-0.36	0.40	0.0	0.10	38	78
EDUCATION																			
Grade 8 or Lower	260		81	46	88		81		74	1.0		-0.05							80
Grade 9 & 10	100	44			88	42		41		0.98	0.68		0.43	-0.37	-0.23	0.04	0.13	47	
Grade 11 & 12	30		86			48	88	51	80	1.0	0.88		0.55			-0.01	0.06	34	71
Diploma or Degree	369	50		52	90			51				0.00		-0.31	-0.36				

CODES	No of people	Leadership Values		Access Leadership		Leader Credibility		Authority Relationships		Work Incentives		Teamness		Work Processes		Social Processes		Problem Solving	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	53	89	43	72	45	82	38	78	44	86	46	77	41	66	54	84	44	68
WORK SITUATION																			
NON UNION	815	52	89	43	72	45	82	38	78	43	86	46	78	41	67	54	85	43	69
UNION	15	55	85	59	67	41	74	57	60	47	74	49	73	39	40	53	72	53	48
GENDER																			
FEMALES	575	57	88	43	69	46	79	38	74	46	83	45	74	41	62	55	82	42	64
MALES	396	47	89	44	75	44	85	37	82	40	89	45	80	42	72	54	88	46	74
EDUCATION																			
Grade 8 or Lower	260	50	87	39	68		83	31	76		85	42	76						
Grade 9 or 10	100	57				41				43				36	60	48	81	39	65
Grade 11 or 12	30		91	47			87		84	57	93	53	82			62	93	48	75
Diploma or Degree	369				76	51		42		57				45	70			48	



Table 3: Summary of Sub Report –Years of Service

Code	No. of People	Overall Compliance		Collaboration		Commitment		Creativity		Balance Index		Polarity Index		Energy Index		Sequence Index		Climate	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	47	81	49	88	44	82	47	74	0.99	0.80	-0.03	+0.46	-0.34	0.26	0.02	0.12	43	77
LANGUAGE																			
ZULU	42					47		40		0.98								52	79
XHOSA	38	41	72	38	79	41	72		64		0.88	-0.1	0.27	-0.41	0.02	-0.02	0.09		67
SOTHO	74			52												0.04	0.13		
AFRIKAANS	601	48						48	75			-0.02		-0.33					
ENGLISH	235		83		90		84		75	1.00	0.75		0.5		0.33		0.13	43	
YEARS WITH ORGANISATION																			
LESS THAN 1 YEAR	91					51		50										50	
1 YEAR	117									0.97	0.72				0.33	0.04			
2 & 3 YEARS	121				91					1.00					0.33		0.13		79
4 & 5 YEARS	116									1.00		-0.07							
6 & 7 YEARS	84		85	41					79				0.53					35	
8 TO 10 YEARS	143	53		58		51		50	71					-0.27		-0.01		50	
11 TO 13 YEARS	98							50		1.00		0.03				0.04			
14 TO 17 YEARS	92	41				40		36	71					-0.41					
18 TO 22 YEARS	64																		
23 TO 28 YEARS	49		77		83		78		71		0.89		0.37		0.14		0.08		72

Code	No. of People	Leadership Values		Access Leadership		Leader Credibility		Authority Relationships		Work Incentives		Teamwork		Work Processes		Social Processes		Problem Solving	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	53	89	43	72	45	82	38	78	44	86	46	77	41	66	54	84	44	68
LANGUAGE																			
ZULU	42	47	80				71	43			76	47		42			71	29	
XHOSA	38			40	63	50		34	70	38			64	39	38	46			55
SOTHO	74	61						34	70	49		44		39					
AFRIKAANS	601			43	73	49					87		79	42		57	86	46	70
ENGLISH	235		91		73		84		81		87	44		42	68		86		
YEARS WITH ORGANISATION																			
LESS THAN 1 YEAR	91		90			50		49				34			62			53	
1 YEAR	117		90																72
2 & 3 YEARS	121		90	34			87					41							
4 & 5 YEARS	116																		
6 & 7 YEARS	84	45	90		77			32			90		82		73		90		
8 & 10 YEARS	143	61		54		50				50									
11 TO 13 YEARS	98									50			71	45		59			
14 TO 17 YEARS	92				68							41				44		29	
18 TO 22 YEARS	64							81		81									
23 TO 28 YEARS	49		84		68	41	74		70	39				38			80		63



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Table 5: Summary of Sub Report – Areas

Code	No. of People	Overall Compliance		Collaboration		Commitment		Creativity		Balance Index		Polarity Index		Energy Index		Sequence Index		Climate	
		Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired	Actual	Desired
PEP STORES	988	47	81	49	88	44	82	47	74	0.99	0.80	-0.03	+0.46	-0.34	0.26	0.02	0.12	45	77
LOWVELD	18				82														
BOPHUTHATSWANA	14	22		17		23		27				-0.38		-0.66		-0.08		17	
NORTHERN FREE STATE	12	35																	
FAR NORTH	21	61	74	68	83					0.99						0.07		65	
GOLD REEF	10																		
NORTHERN NATAL	13		72				69							0.03		0.18		60	
PIETERSBURG	20																	64	
PRETORIA	17																		
ERMELO	7		88		93				83				0.62		0.33				
HIGHVELD	13		72				81								0.02				
PEP REEF	6															-0.07	0.06	22	
PTA SUBURBS	15																		
NATAL SOUTH COAST	13	28		29		26		30		0.99		-0.27		-0.57					
WINELANDS	16		72		84		68							0.02	0.11	0.16			
KOKSTAD	14																		
HELDERBERG	16							78											
GARDEN ROUTE	12	64	85	71		61	88					0.16	0.56	-0.12	0.40				
EASTERN KAROO	10		68					31		0.61			0.24		-0.06	0.14		65	
LITTLE KAROO	15				90												0.17		
PORT ELIZABETH	9		64										0.18					60	
CISKELI	14		72		83										0.02	-0.05		63	
QVAMBO																			
BLOEMFONTEIN	14									0.99									
KUNENE																			
GOLDFIELDS	16																		
MALUTI	10	30		30	93		85			0.99		-0.25		-0.55		0.17	24		
NORTHERN CAPE	11				83			61											
SOUTHERN LESOTHO	3	4	95	1	95	4	96	7	97			-0.88	0.81					0	93
WILDTUIN	15	63	73	77						0.75		0.16		-0.14		-0.15	0.06	63	65
JOHANNESBURG	13	61															-0.17		
STANDERTON	3	76	88		94	68		74	87	0.77		0.35		0.12	0.53	0.14		78	90
VENDA	15	61	64	69			64				0.92		0.17		-0.12			73	
VAAI TRIANGLE	9				82					0.86						0.11			85



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## **ADDENDUM C:**

### **BREAKDOWN OF HYPOTHESIS ONE INTO SUB-HYPOTHESES 1.1-1.13**



### Hypothesis 1.1

H<sub>01.1</sub>: There exists no relationship between *collaboration* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.1, a significant, negative correlation coefficient was found ( $r = -0.261$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *collaboration* (independent variable) and stock losses (dependent variable).

The coefficient of determination is the square of the correlation coefficient. It indicates what percentage of the total variance of  $x$  is explained by the variance of  $y$ . This percentage is given by the expression  $r^2 \times 100$  and in this case = 6.81%. Therefore, the *collaboration* dimension declares 6.81% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *reciprocal X* model. The equation is:

$$Y = -0.537 + 13.1838 / X$$

### Hypothesis 1.2

H<sub>01.2</sub>: There exists no relationship between *commitment* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.1, a significant, negative correlation coefficient was found ( $r = -0.263$ ,  $p < 0.05$ ). The null hypothesis is, therefore, rejected in favour of the alternative hypothesis, namely that a significantly negative relationship

exists between *commitment* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.92%. Therefore, the *commitment* dimension declares 6.92% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = -0.5538 + 12.4122 / X$$

### Hypothesis 1.3

H<sub>01.3</sub>: There exists no relationship between *creativity* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1, that a significant, negative correlation coefficient was found ( $r = -0.302$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *creativity* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 9.12%. Therefore, the *creativity* dimension declares 9.12% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = -1.346 + 22.0003 / X$$



#### Hypothesis 1.4

H<sub>01.4</sub>: There exists no relationship between *leadership / management values*, as a dimension of organisational culture, and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.262$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *leadership / management values* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.86%. Therefore, the *leadership / management values* dimension declares 6.86% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *linear* model. The equation is:

$$Y = -4.3948 + 0.2227 \times X$$

#### Hypothesis 1.5

H<sub>01.5</sub>: There exists no relationship between *access leadership / support structures*, as a dimension of organisational culture, and stock losses, which is indicative of organisational performance.

As is evident from Table 5.1, a significant, negative correlation coefficient was found ( $r = -0.268$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *access leadership / support structures* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 7.18%. Therefore, the *access leadership / support structures* dimension declares 7.18% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = -1.2502 + -(0.2227) / X$$

### **Hypothesis 1.6**

H<sub>01.6</sub>: There exists no relationship between *leadership / management credibility*, as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.1, a significant, negative correlation coefficient was found ( $r = -0.319$ ,  $p < 0.02$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *leadership / management credibility* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 10.18%. Therefore, the *leadership / management credibility* dimension declares 10.18% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = 0.3769 + (-12.9966) / X$$



### Hypothesis 1.7

H<sub>01.7</sub>: There exists no relationship between *climate* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.1, a significant, negative correlation coefficient was found ( $r = -0.264$ ,  $p < 0.05$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *climate* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.97%. Therefore, the *climate* dimension declares 6.97% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *reciprocal X* model. The equation is:

$$Y = 0.544 + (-12.6635) / X$$

### Hypothesis 1.8

H<sub>01.8</sub>: There exists no relationship between *authority relationship / impact* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.264$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *authority relationship / impact* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.97%. Therefore, the *authority relationship / impact* dimension declares 6.97% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X&Y* model. The equation is:

$$Y = X / (-0.1903 + 0.4095 \times X)$$

### Hypothesis 1.9

H<sub>01.9</sub>: There exists no relationship between *relevance / work incentives* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.267$ ,  $p < 0.02$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *relevance/work incentives* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 7.13%. Therefore, the *commitment* dimension declares 7.13% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = 1.0848 + (-9.708) / X$$



### Hypothesis 1.10

H<sub>01.10</sub>: There exists no relationship between *teamness / community* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.314$ ,  $p < 0.02$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *commitment* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 9.86%. Therefore, the *teamness / community* dimension declares 9.86% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *reciprocal X* model. The equation is:

$$Y = 0.2799 + (-13.8314) / X$$

### Hypothesis 1.11

H<sub>01.11</sub>: There exists no relationship between *work processes / task environment*, as a dimension of organisational culture and stock losses, which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.263$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *processes / task environment* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.92%. Therefore, the *processes/task environment* dimension declares 6.92% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X&Y* model. The equation is:

$$Y = X / (-0.536 + 0.4825 \times X)$$

### **Hypothesis 1.12**

H<sub>01.12</sub>: There exists no relationship between *social context / processes* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a very strong significant, negative correlation coefficient was found ( $r = -0.579$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *social context/processes* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 33.52%. Therefore, the *social context/processes* dimension declares 33.52% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = 1.0959 + (-22.0351) / X$$



### Hypothesis 1.13

H<sub>01.13</sub>: There exists no relationship between *problem solving process* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.263$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *problem solving process* (independent variable) and stock losses (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.92%. Therefore, the *problem solving process* dimension declares 6.92% of the variance in stock losses.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X&Y* model. The equation is:

$$Y = X / (-0.8292 + 0.5392 \times X)$$

## **ADDENDUM D:**

### **BREAKDOWN OF HYPOTHESIS TWO INTO SUB-HYPOTHESES 2.1-2.13**



## Hypothesis 2.1

H02.1: There exists no relationship between *collaboration* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.408$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *collaboration* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 16.65%. Therefore, the *commitment* dimension declares 16.65% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = 6.2552 + (11.3614)/ X$$

## Hypothesis 2.2

H02.2: There exists no relationship between *commitment* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.473$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *commitment* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 22.37%. Therefore, the *commitment* dimension declares 22.37% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal X* model. The equation is:

$$Y = 5.9597 + (9.3898) / X$$

### **Hypothesis 2.3**

H<sub>02.3</sub>: There exists no relationship between *creativity* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.534$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *creativity* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 28.52%. Therefore, the *creativity* dimension declares 28.52% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 7.8689 + 18.9159 / X$$



## Hypothesis 2.4

H02.4: There exists no relationship between *leadership/management values* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.392$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *leadership/management values* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is  $= 15.37\%$ . Therefore, the *leadership/management values* dimension declares  $15.37\%$  of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *reciprocal X* model. The equation is:

$$Y = 6.1941 + 11.5762 / X$$

## Hypothesis 2.5

H02.5: There exists no relationship between *access leadership / support structures* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.327$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *access leadership / support structures* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 10.69%. Therefore, the *access leadership / support structures* dimension declares 10.69% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.2196 + (5.8922) / X$$

### **Hypothesis 2.6**

H02.6: There exists no relationship between *leadership/management credibility* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.477$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *leadership/management credibility* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 22.75%. Therefore, the *leadership/management credibility* dimension declares 22.75% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.1837 + (5.676) / X$$



### Hypothesis 2.7

H02.7: There exists no relationship between *climate* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.414$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *climate* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 17.14%. Therefore, the *climate* dimension declares 17.14% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 6.5232 + (12.209) / X$$

### Hypothesis 2.8

H02.8: There exists no relationship between *authority relationship / impact* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.355$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *authority relationship / impact* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 12.60%. Therefore, the *authority relationship / impact* dimension declares 12.60% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal Y* model. The equation is:

$$Y = 1 / (0.15784 + 0412 \times X)$$

### Hypothesis 2.9

H02.9: There exists no relationship between *relevance/work incentives* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.585$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *relevance/work incentives* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 34.22%. Therefore, the *commitment* dimension declares 34.22% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *linear* model. The equation is:

$$Y = 1.5615 + 0.5088 X$$



### Hypothesis 2.10

H02.10: There exists no relationship between *teamness / community* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.484$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *commitment* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 23.43%. Therefore, the *teamness / community* dimension declares 23.43% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.4573 + (7.1274) / X$$

### Hypothesis 2.11

H02.11: There exists no relationship between *work processes / task environment* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.385$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *processes/task environment* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 14.82%. Therefore, the *processes / task environment* dimension declares 14.82% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.4573 + 7.1274 / X$$

### **Hypothesis 2.12**

H<sub>02.12</sub>: There exists no relationship between *social context / processes* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.1 that a very strong significant, positive correlation coefficient was found ( $r = -0.559$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *social context / processes* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 31.25%. Therefore, the *social context/processes* dimension declares 31.25% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.9886 + (10.4685) / X$$



### Hypothesis 2.13

H02.13: There exists no relationship between *problem solving process* as a dimension of organisational culture and profit which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, positive correlation coefficient was found ( $r = +0.505$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between *problem solving process* (independent variable) and profit (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is  $= 25.50\%$ . Therefore, the *problem solving process* dimension declares 25.50% of the variance in profit.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.8447 + 8.9459 / X)$$

## **ADDENDUM E:**

### **BREAKDOWN OF HYPOTHESIS THREE INTO SUB-HYPOTHESES 3.1-3.13**



### Hypothesis 3.1

H<sub>03.1</sub>: There exists no relationship between *collaboration* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.447$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *collaboration* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 19.98%. Therefore, the *commitment* dimension declares 19.98% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Logarithmic* model. The equation is:

$$Y = 20.36323 + 9.8069 \text{ LN } X$$

### Hypothesis 3.2

H<sub>03.2</sub>: There exists no relationship between *commitment* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.468$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *commitment* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 21.90%. Therefore, the *commitment* dimension declares 21.90% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables the *Linear* model. The equation is:

$$Y = 51324 + (-45.4686) X$$

### Hypothesis 3.3

H<sub>03.3</sub>: There exists no relationship between *creativity* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.372$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *creativity* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 13.84%. Therefore, the *creativity* dimension declares 13.84% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables the *Reciprocal X* model. The equation is:

$$Y = 4.7641 + (-45.3027) / X$$



### Hypothesis 3.4

H03.4: There exists no relationship between *leadership / management values* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.503$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *leadership / management values* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 25.30%. Therefore, the *leadership/management values* dimension declares 25.30% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *exponential* model. The equation is:

$$Y = 1.9959 \times \text{EXP} (0.1076 \times X)$$

### Hypothesis 3.5

H03.5: There exists no relationship between *access leadership / support structures* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.517$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *access leadership / support structures* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 26.73%. Therefore, the between *access leadership / support structures* dimension declares 26.73% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 5.2196 + (-5.8922) / X$$

### **Hypothesis 3.6**

H<sub>03.6</sub>: There exists no relationship between *leadership / management credibility* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.518$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *leadership / management credibility* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 26.83%. Therefore, the *leadership / management credibility* dimension declares 26.83% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line the best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 2.7703 + (-33.8601) / X$$



### Hypothesis 3.7

H03.7: There exists no relationship between *climate* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.350$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *climate* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 12.25%. Therefore, the *climate* dimension declares 12.25% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *linear* model. The equation is:

$$Y = 14.1176 + (-1.9623) X$$

### Hypothesis 3.8

H03.8: There exists no relationship between *authority relationship / impact* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.374$ ,  $p < 0.01$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *authority relationship / impact* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 13.98%. Therefore, the *authority relationship / impact* dimension declares 13.98% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *exponential* model. The equation is:

$$Y = 1.9959 \times \text{EXP} (0.10760 \times X)$$

### Hypothesis 3.9

H03.9: There exists no relationship between *relevance / work incentives* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.590$ ,  $p < 0.001$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *relevance / work incentives* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 34.81%. Therefore, the *commitment* dimension declares 34.81% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = -2.3241 + (-31.643) / X$$



### Hypothesis 3.10

H<sub>03.10</sub>: There exists no relationship between *teamness / community* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.693$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *commitment* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 48.02%. Therefore, the *teamness / community* dimension declares 48.02% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 4.461 + (-42.7947) / X$$

### Hypothesis 3.11

H<sub>03.11</sub>: There exists no relationship between *work processes / task environment* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.263$ ,  $p < 0.05$ ). The null hypothesis is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *processes / task environment* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 6.92%. Therefore, the *processes / task environment* dimension declares 6.92% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *reciprocal Y* model. The equation is:

$$Y = 1 / (2.5274 + -0.3463 X)$$

### **Hypothesis 3.12**

H03.12: There exists no relationship between *social context / processes* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a very strong significant, negative correlation coefficient was found ( $r = -0.643$ ,  $p < 0.001$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *social context / processes* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is = 41.35%. Therefore, the *social context / processes* dimension declares 41.35% of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of y on x between the above variables was the *Reciprocal X* model. The equation is:

$$Y = 3.216 + (-40.1033) / X$$



### Hypothesis 3.13

H03.13: There exists no relationship between *problem solving process* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

It is evident from Table 5.1 that a significant, negative correlation coefficient was found ( $r = -0.274$ ,  $p < 0.05$ ). The null hypothesis is thus rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between *problem solving process* (independent variable) and labour turnover (dependent variable).

The coefficient of determination, the square of the correlation coefficient, for this relationship is  $= 7.51\%$ . Therefore, the *problem solving process* dimension declares  $7.51\%$  of the variance in labour turnover.

After completing the regression analysis, the regression model that provided the line that best suited the data was determined. The regression equation of  $y$  on  $x$  between the above was the *Reciprocal Y* model. The equation is:

$$Y = (10.3217 + -1.1854 X)$$

## **ADDENDUM F:**

### **BREAKDOWN OF HYPOTHESES FOUR INTO SUB-HYPOTHESIS 4.1-4.13**



### **Hypothesis 4.1**

H<sub>04.1</sub>: There exists no relationship between the variation in the reported scores of *collaboration* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.306$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *collaboration* scores (independent variable) and stock losses (dependent variable).

### **Hypothesis 4.2**

H<sub>04.2</sub>: There exists no relationship between the variation in the reported scores of *commitment* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.287$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *commitment* scores (independent variable) and stock losses (dependent variable).

### **Hypothesis 4.3**

H<sub>04.3</sub>: There exists no relationship between the variation in the reported *creativity* scores as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.268$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship

exists between the *variation* in the *creativity* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.4**

H04.4: There exists no relationship between the variation in the reported scores of *leadership / management values* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.304$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the of *leadership / management values* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.5**

H04.5: There exists no relationship between the variation in the reported scores of *access leadership / support structure*, as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.281$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *access leadership / support structure* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.6**

H04.6: There exists no relationship between the variation in the reported scores of *leadership / management credibility* as a dimension of organisational culture and stock losses which is indicative of organisational performance.



As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.273$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *leadership / management credibility* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.7**

H<sub>04.7</sub>: There exists no relationship between the variation in the reported scores of *climate* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.288$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *climate* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.8**

H<sub>04.8</sub>: There exists no relationship between the variation in the reported scores of *authority relationship / impact* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.291$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *authority relationship/impact* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.9**

H04.9: There exists no relationship between the variation in the reported scores of *relevance / work incentives* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.307$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *relevance / work incentives* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.10**

H04.10: There exists no relationship between the variation in the reported scores of *teamness / community* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.299$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *teamness / community* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.11**

H04.11: There exists no relationship between the variation in the reported scores of *work processes / task environment* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.275$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship



exists between the *variation* in the *work processes / task environment* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.12**

H04.12: There exists no relationship between the variation in the reported scores of *social context / processes* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.306$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *social context / processes* scores (independent variable) and stock losses (dependent variable).

#### **Hypothesis 4.13**

H04.13: There exists no relationship between the variation in the reported scores of *problem solving process* as a dimension of organisational culture and stock losses which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.274$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *problem solving process* scores (independent variable) and stock losses (dependent variable).

## **ADDENDUM G:**

### **BREAKDOWN OF HYPOTHESIS TWO INTO SUB-HYPOTHESES 5.1-5.13**



### **Hypothesis 5.1**

H05.1: There exists no relationship between the variation in the reported scores of *collaboration*, as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.314$ ,  $p < 0.02$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *collaboration* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.2**

H05.2: There exists no relationship between the variation in the reported scores of *commitment* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.274$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *commitment* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.3**

H05.3: There exists no relationship between the variation in the reported *creativity* scores as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.262$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship

exists between the *variation* in the *creativity* scores (independent variable) and profit (dependent variable).

#### **Hypothesis 5.4**

H05.4: There exists no relationship between the variation in the reported scores of *leadership / management values* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.296$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the of *leadership / management values* scores (independent variable) and profit (dependent variable).

#### **Hypothesis 5.5**

H05.5: There exists no relationship between the variation in the reported scores of *access leadership / support structure* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.291$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *access leadership / support structure* scores (independent variable) and profit (dependent variable).

#### **Hypothesis 5.6**

H05.6: There exists no relationship between the variation in the reported scores of *leadership / management credibility*, as a dimension of organisational culture, and profit, which is indicative of organisational performance.



As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.286$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *leadership / management credibility* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.7**

H05.7: There exists no relationship between the variation in the reported scores of *climate* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.278$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *climate* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.8**

H05.8: There exists no relationship between the variation in the reported scores of *authority relationship / impact*, as a dimension of organisational culture, and profit, which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = +0.267$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *authority relationship / impact* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.9**

H05.9: There exists no relationship between the variation in the reported scores of *relevance / work incentives* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.285$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *relevance / work incentives* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.10**

H05.10: There exists no relationship between the variation in the reported scores of *teamness / community* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.304$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *teamness / community* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.11**

H05.11: There exists no relationship between the variation in the reported scores of *work processes / task environment* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.275$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship



exists between the *variation* in the *work processes / task environment* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.12**

H05.12: There exists no relationship between the variation in the reported scores of *social context / processes* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.301$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *social context / processes* scores (independent variable) and profit (dependent variable).

### **Hypothesis 5.13**

H05.13: There exists no relationship between the variation in the reported scores of *problem solving process* as a dimension of organisational culture and profit which is indicative of organisational performance.

As is evident from Table 5.3, a significant, negative correlation coefficient was found ( $r = -0.321$ ,  $p < 0.02$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly negative relationship exists between the *variation* in the *problem solving process* scores (independent variable) and profit (dependent variable).

## **ADDENDUM H:**

### **BREAKDOWN OF HYPOTHESIS THREE INTO SUB-HYPOTHESES 6.1-6.13**



### Hypothesis 6.1

H<sub>06.1</sub>: There exists no relationship between the variation in the reported scores of *collaboration* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.273$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *collaboration* scores (independent variable) and labour turnover (dependent variable).

### Hypothesis 6.2

H<sub>06.2</sub>: There exists no relationship between the variation in the reported scores of *commitment* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.264$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *commitment* scores (independent variable) and labour turnover (dependent variable).

### Hypothesis 6.3

H<sub>06.3</sub>: There exists no relationship between the variation in the reported *creativity* scores as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.302$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship

exists between the *variation* in the *creativity* scores (independent variable) and labour turnover (dependent variable).

#### **Hypothesis 6.4**

H06.4: There exists no relationship between the variation in the reported scores of *leadership / management values* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.292$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the of *leadership/management values* scores (independent variable) and labour turnover (dependent variable).

#### **Hypothesis 6.5**

H06.5: There exists no relationship between the variation in the reported scores of *access leadership / support structure* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.279$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *access leadership/support structure* scores (independent variable) and labour turnover (dependent variable).

#### **Hypothesis 6.6**

H06.6: There exists no relationship between the variation in the reported scores of *leadership / management credibility* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.



As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.287$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *leadership / management credibility* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.7**

H06.7: There exists no relationship between the variation in the reported scores of *climate* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.279$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *climate* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.8**

H06.8: There exists no relationship between the variation in the reported scores of *authority relationship / impact* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.298$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *authority relationship / impact* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.9**

H<sub>06.9</sub>: There exists no relationship between the variation in the reported scores of *relevance / work incentives* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.276$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *relevance / work incentives* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.10**

H<sub>06.10</sub>: There exists no relationship between the variation in the reported scores of *teamness / community* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.306$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *teamness / community* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.11**

H<sub>06.11</sub>: There exists no relationship between the variation in the reported scores of *work processes / task environment* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.265$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship



exists between the *variation* in the *work processes / task environment* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.12**

H<sub>06.12</sub>: There exists no relationship between the variation in the reported scores of *social context / processes* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.274$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *social context / processes* scores (independent variable) and labour turnover (dependent variable).

### **Hypothesis 6.13**

H<sub>06.13</sub>: There exists no relationship between the variation in the reported scores of *problem solving process* as a dimension of organisational culture and labour turnover which is indicative of organisational performance.

As is evident from Table 5.3, a significant, positive correlation coefficient was found ( $r = +0.274$ ,  $p < 0.05$ ). The null hypothesis, therefore, is rejected in favour of the alternative hypothesis, namely that a significantly positive relationship exists between the *variation* in the *problem solving process* scores (independent variable) and labour turnover (dependent variable).